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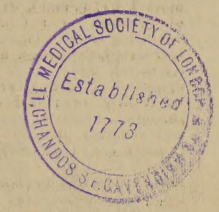

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The London Medical Recorder.

ARTICLE 1.

ROTTER, SONNENBURG, AND WEIZÄCKER ON CHARCOT'S DISEASE.

THE following contributions have recently been published by Rotter and Sonnenburg, of Berlin, and by Weizäcker, of Tübingen :—

In the *Archiv für Klinische Chirurgie*, Band xxxvi., Heft 1, Dr. Julius Rotter considers in the first place whether the articular affections of tabetic patients constitute a special arthropathy differing from every other form of joint disease, and, secondly, whether these affections have a merely external and indirect, or an internal and causal, connection with tabes. In order to approach a solution of these contested questions, the author has closely studied all the recorded cases, together with some observed by himself. Special attention is directed to intra-articular fracture in the clinical history of tabetic arthropathy, and three cases are appended to the paper, in which fracture in a previously healthy joint was followed by this joint affection. The fact must be generally recognised, the author thinks, that the clinical picture of tabetic arthropathy presents a group of special symptoms that are not to be found in other forms of chronic non-suppurative articular inflammation. These symptoms, it must be allowed, are so striking, that the clinical observer is now able to recognise the tabetic form of arthropathy before the patient has been interrogated concerning any disease of the nervous system. The view, supported by strictly clinical investigation, that the so-called tabetic arthropathy is a special and independent joint affection, is, however, not supported by study of its pathological anatomy. Virchow has shown that the pathological processes in the early stage of tabetic arthropathy resemble those observed in ordinary arthritis deformans. According to Rotter, pathological investigations prove that this joint affection presents at first the signs of arthritis deformans, or of the results of intra-articular fracture, but that in its course there is much breaking down of osseous structure, and that the morbid changes in the ends of the bone are very often more advanced in tabetic arthropathy than in typical arthritis deformans, or after intra-articular fracture. The deviations presented by tabetic arthropathy from the normal course of the two latter conditions is to be explained, Rotter holds, by the analgesia of the affected joint by inco-ordination of movements and by abnormal fragility of bone. It is not necessary, he states, that all these three factors should act together, and at the same time. Analgesia, however, is never absent, and may by itself be the condition of all the special features of tabetic arthropathy.

In opposition to Charcot's views as to the spinal origin of tabetic arthropathy, Rotter holds with Volkmann and Virchow that, in consequence of the nerve lesion, certain conditions are established through which certain joints are more frequently subjected to injurious external influences, and are rendered less resistant to such. The arthropathy commences as an arthritis deformans or a traumatic arthritis, and the subsequent peculiarities of the disease are due to the above conditions. It is pointed out that tubercular, syphilitic, and suppurative affections of joints may take a much more severe course in tabetic patients than they do under ordinary conditions. This form of arthropathy then, in Rotter's opinion, is not caused directly by the spinal lesion, and therefore not of specific tabetic origin, but is unfavourably influenced by this lesion, just as in a diabetic patient suppuration cannot be set up in consequence of the bad state of the fluids of the body, without the co-operation of micro-organisms, but, when once set up by infection, runs a malignant course. If this view of the nature of tabetic arthropathy be accepted, then it may be assumed that the peculiar features of this affection may be presented in a non-tabetic subject, when similar conditions to those of tabes, especially anæsthesia of the affected joint, exist.

In a lecture delivered at the last meeting of the German Society of Surgery, and published in the *Archiv für Chirurgie*, Band xxxvi., Heft 1, Professor E. Sonnenburg questions the force of Rotter's conclusions, as they are based for the most part on study of tabetic arthropathy in very extreme and advanced forms, and the records of many of his collected cases are very scanty. The affection in its early stage usually evades both clinical and pathological investigation, and, as we know nothing of its beginning, it is very difficult to determine what causes co-operate in the primary development of the articular degeneration. It is held in this lecture that we cannot settle the question whether or not the special articular changes of tabetic arthropathy really have a close and direct connection with the morbid process of grey degeneration in the posterior columns of the cord, before we are in a position to observe and study the articular lesions that occur in the early stages of tabes, and, above all, to follow their development. Sonnenburg, though not denying the influence of ataxy and analgesia in the production of the worst lesions of the articular affection, points out that typical tabetic arthropathy is often present without ataxy, and quotes a case recorded by Debove in which a patient, suffering from ataxy in the lower but not in the upper extremities, presented the most advanced articular degeneration in the left elbow and both shoulders. With regard to analgesia it is held to be very difficult to determine the influence of this factor in the development of the articular affection. The sensory disturbances in tabetic subjects fluctuate very much, and it is not easy to prove that they exist in deep-seated parts. Sonnenburg states that abnormal fragility of bone, when present, has clearly an influence on the advance of the existing, and on the origin of fresh, arthropathies, and he points out that such fragility co-exists with other affections of the nervous system, and also that under the influence of tabes, bone undergoes extreme disturbances of nutrition and is sometimes affected with necrosis. As indications of an intimate connection of this form of arthropathy with grey degeneration of the cord, attention is directed to the facts of the multiplicity of the affection both in its early and benign and its advanced and malignant forms, that the joints of the upper extremities are sometimes exclusively affected, and that hardly any joint in the body can be regarded as safe from an attack. The articular changes that occur in this arthropathy do not occur in association with any neurosis save tabes, the joint affection sometimes observed in cases of disease and injury of the nervous system being

usually limited in extent and having a tendency rather to ankylosis than to abnormal mobility. Allusion is made, however, to certain cases reported by Riedel and Joffroy of extensive destruction of the knee after punctured wound of the spinal cord. The articular affection of early syphilis consists usually in subacute inflammation and intra-articular effusion, and is attended with nocturnal pain and pain on moving the affected limb. The arthritis of tertiary syphilis which has been regarded by some as arthritis deformans, differs from this latter affection, according to Virchow, in its pathological characters. In conclusion Sonnenburg holds that he has established by his researches that very early in the course of tabes and as a result of this disease, certain articular changes occur, from which hardly any joint in the body is safe, but which affect most frequently the larger joints of the extremities. This affection is to be regarded as one of the non-constant symptoms of tabes. The earlier lesions may disappear or lead to persistent articular changes, such as thickening of the capsule, extension of the ligaments, &c. As the tabes advances, these anatomical lesions favour the production of extensive destructive changes in the joint through the action of external and local influences. Whether the primary changes in the affected joints be due to changes in the posterior columns and grey matter of the cord or to peripheral nerve degeneration, has yet to be made out.

Weizäcker's report (Bruns, *Beiträge zur Klinische Chirurgie*, Band ii.) is based on 2 cases observed in the Tübingen Surgical Clinic, and on a collection of 105 previously recorded cases, of which 53 have been taken from French, 36 from English, and 16 from German sources. The joint most frequently affected is the knee, next in order stands the hip, and those in which the disease is most rarely observed are the wrist and temporo-maxillary joints. The arthropathy, it is stated, usually appears in the primary stage of tabes, and often precedes any prominent manifestation of disturbances of co-ordination. The affection is especially characterised by its sudden and unexpected onset and its rapid development. The articular swelling usually attains its maximum in the course of a few hours or days, and may become very marked. This swelling is due to effusion into the cavity of the joint, and into the peri-articular tissue, and is associated with hard œdema of the whole extremity, the functions of which, however, are not often much interfered with. The œdema usually diminishes very much in the course of a short time, and the swelling is mainly restricted to the affected joint. The articular structures then undergo certain morbid changes which result in rubbing, grating, and distinct cracking noises during movement. According to the degree of the morbid changes there are to be distinguished mild and severe forms of tabetic arthropathy. In the former the swelling gradually disappears, and there remains but slight stiffness of the joint. In such condition, however, there is a constant tendency to relapse. In the latter and severe form the joint and adjacent parts remain swollen, and there is considerable destruction of the articular elements, rendering possible free movements of the limbs in abnormal directions. In the most advanced cases the capsule of the joint is completely destroyed, and is replaced by a tough tissue, in which no constituents of normal ligament are to be found. The changes in the articular ends of bones vary in different cases, and may be either atrophic or hypertrophic. Very characteristic is the atrophic form, in which, in the place of the normal articular head, the bone presents a reduced and eroded diaphysial extremity resembling the end of a drumstick. The borders of the affected articular cavity are flattened, and the cavity itself is much expanded. In the hypertrophic form, which occurs especially in the knee and elbow, numerous intra-articular growths are found. At the articular ends of the bones deep erosions alternate with osseous outgrowths, and the cartilage is part of it destroyed, part of it discoloured, thinned, and undermined. In the hypertrophic form the process is one of sclerosis, in the atrophic form one of rarefaction. The most frequent complications of tabetic arthropathy are dislocations, which occur especially in the atrophic form of the affection, but do not interfere very much with the utility of the limb, and spontaneous fractures due to an extension of the morbid process from the epiphyses to the diaphyses. Then there are the trophic disturbances often met with in tabes, such as perforating ulcer, shedding or dystrophy of the nails, loosening of the teeth, muscular atrophy, and intestinal troubles. Very exceptional features in the arthropathy of tabes are pain in the affected joint and suppuration. Weizäcker rejects the explanation that this arthropathy is the result of mechanical lesions of joints, such as are produced through disturbances of co-ordination, for, it is stated, in the majority of cases the joint affection is established before the appearance of any symptoms of impaired co-ordination. He agrees with those who hold that the arthropathy observed in cases of tabes is a special disease, and not to be identified with any other articular affection, such as arthritis deformans, or syphilitic joint disease. The arthropathy, it is thought, is in all probability directly dependent on tabes, as are the recognised trophic disturbances. In conclusion, the author opposes the view that the association of tabes and arthropathy is due to a central origin of the latter, and favours, on the other hand, the hypothesis that the joint affection is the result of an independent degenerative process at the peripheral extremities of certain nerves.

W. JOHNSON SMITH.

ARTICLE 2.

BULL ON GASTROTOMY FOR THE DIGITAL EXPLORATION OF THE ŒSOPHAGUS AND REMOVAL OF FOREIGN BODY.

IN a paper read at a meeting of the New York Surgical Society on Oct. 12, and reported in the *New York Medical Journal*, Oct. 29, 1887, Dr. William T. Bull has reported a successful case in which a foreign body in the œsophagus was thrust upwards and removed by the mouth after the performance of gastrotomy. The patient, a coloured lad, sixteen years of age, was admitted into the New York Hospital five days after he had swallowed a peach-stone. The foreign body was impacted in the œsophagus thirteen inches from the teeth. In the course of forty-eight hours two efforts were made to dislodge it with instruments through the mouth. As the situation of the foreign body, six or seven inches being allowed for the distance from the teeth to the wound in the neck, would have left six or seven inches of the œsophagus to manipulate through, Dr. Bull discarded œsophagotomy and decided on

gastrotomy. On considering the best method of performing the latter operation with least injury to the parts, he was led to these reflections: '(1) That large incisions in the abdominal wall and stomach, together with the manipulation of that organ outside of the abdominal cavity, and the introduction of the hand into it, ought to be avoided if possible. (2) That the exploration could be effected by the finger alone, introduced through a small wound, if the anterior wall of the stomach were invaginated so as to fold itself about and behind the finger entering the œsophagus. (3) That the nearness of the œsophageal opening in the diaphragm to the vertebral column would make that structure an easy guide to the orifice, and, moreover, an incision in the median line would be nearer to that orifice than one parallel to the border of the ribs. With this incision the hand or finger would be less encumbered by the overhanging ribs. (4) That the nature of the body, it being smooth and free from sharp corners, made it probable that it would be safe to push it up from below, or to draw it up, in case it could not be easily dislodged downwards into the stomach.' The abdominal cavity was opened by an incision three inches in length, extending from the level of the ninth costal cartilage to a point two inches above the umbilicus. This exposed a part of the anterior wall of the stomach and its greater curvature about two inches and a half from the pylorus. The part of the anterior wall selected for incision was about three inches distant from the pylorus, and midway between the greater and lesser curvatures. Dr. Bull drew this part out of the abdominal wound and put two loops of silk through it two inches apart in a vertical line, and made an incision one inch and a quarter in length between them. The index finger was inserted, and passed directly backwards till the vertebral column was felt, then upwards till it entered the œsophagus. The finger stopped up the wound so that nothing could escape from the stomach, and the anterior wall of the viscus followed the finger into the cavity and was folded on itself like the invaginated scrotum in examination of the inguinal canal. After unsuccessful attempts to dislodge the peach-stone with curved and straight forceps, Dr. Bull determined to push it up from below. A slender bougie was passed through the stomach and œsophagus over the finger, and projected from the mouth. A sponge, half an inch in diameter and one inch and a half long, was tied to the lower extremity of the bougie with strong silk, one end of which was left long. The sponge was pulled through, meeting with little resistance, but the foreign body, though apparently dislodged, was not brought up. A larger sponge was then tied to the long end of the silk and drawn through. This brought the stone into the mouth, where it was met and extracted by the finger. The gastric mucous membrane was brought together by eight catgut sutures, and the peritoneal coat by ten Lembert sutures of fine carbolised silk. The abdominal incision was closed by a continuous peritoneal suture of catgut, and interrupted silk sutures through the other layers. The operation, which lasted one hour and a quarter, was followed by rapid recovery. The wound healed over its whole extent by primary union, and the patient sat up on the tenth day, and a week later was able to walk about. In his comments on this case Dr. Bull alludes to Loreta's successful practice of digital dilatation of the constricted pyloric orifice, and also to Richardson's successful case, noticed in the LONDON MEDICAL RECORD (April 15, 1887, Art. 6667), in which a large foreign body, impacted in the lower end of the œsophagus for ten months, was removed by the stomach after the introduction of the hand and forearm into the cavity, and argues that in gastrotomy surgeons have an additional resource in dealing with foreign bodies in the œsophagus. The comparative safety of the operation may be judged from tables of cases of gastrotomy for foreign bodies in the stomach. Of twelve instances, collected by Bernays and Richardson, of removal of foreign bodies from the uninjured and non-adherent stomach, and of two instances of removal of impacted foreign body from the œsophagus, all but two were successful. The statistics of œsophagotomy collected by Dr. Markoe show that the operation was fatal in nineteen out of sixty-three cases. It is certainly dangerous, Dr. Bull states, to use forceps which open in the œsophagus when the lumen of this passage is completely occluded, and those bodies which are flat and lie crosswise can be caught only by specially contrived instruments, or withdrawn by getting such an angular instrument as the coin-catcher beyond them. Pressure from below with a large bougie would disengage any sort of body. It is held that, whilst as a general rule the surgeon can deal with any foreign body by the operation in the neck, if it be impacted within the reach of the finger manipulating in the œsophagotomy, which distance, according to Richardson is six inches from the cricoid cartilage, below this point gastrotomy would be found necessary and probably safe and efficient.

W. JOHNSON SMITH.

ARTICLE 3.

GEORGI AND EWALD ON GALL-STONES AND PERNICIOUS ANÆMIA.

DR. GEORGI'S article (*Berliner Klin. Wochensch.*, Nos. 44 and 45) is written with the view of throwing light upon that still mysterious pathological entity, pernicious anæmia. In 'essential' pernicious anæmia no visceral changes are found *post mortem* sufficient to account for the character of the blood during life; nevertheless cases of visceral disease connected with severe anæmia may help us towards a better knowledge of the true pernicious anæmia, which is not yet explained even by the assumption of hæmatopoietic functions on the part of bone-marrow.

The case narrated by Dr. Georgi is as follows: — Organ-grinder, aged 36. Tall, fat, well-built man with wax-like pallor of face. Has lost his eyesight since childhood. Has always had good health till last year, when dull pains in the right side troubled him now and then, and he had a continual feeling of weight over the liver-region. He had a yellowish complexion at times. During the last few weeks the pain has become worse, and an extreme debility was felt, the weariness amounting to complete prostration. Occasional vomiting and syncopal attacks.

Present condition. Can hardly stand. Marked pallor with yellowish tint. Large leucoma over each cornea. Complains of frequent noises in ears. Hearing good. No epistaxis. Is most uncomfortable in horizontal position. No strumous enlargements. Speech slow; of apathetic character. Lungs present nothing unusual. The cardiac dulness is increased to the right; superficial pulsations in epigas-

trium. Heart displaced towards right side. Limit of dulness near right nipple on right side, and in parasternal line on left. Apex-beat decidedly strong. Second pulmonary sound accentuated, otherwise no abnormal sounds. Slight blowing over clavicular region. Pulse full and soft, 92. Temp. 37°·5 C.

Abdomen of normal appearance. Hepatic region not very tender; dulness extends a little below the ribs; surface of liver feels smooth. Gall-bladder cannot be felt. Other organs normal, urine normal, except that the chloroform-test shows a small quantity of biliary colouring matter. Bowels somewhat constipated. Bloody stools occasionally. No hæmorrhoids.

No visceral cause of the great debility and pallor being found, the blood was examined and revealed advanced poikilocytosis (corpuscular alteration). The leucocytes were more numerous than the red, but not more numerous than the red and the altered corpuscles together; the red being in the minority. Some enlarged discs were present, which appeared in acid fuchsin to be double contoured, and finely granulated on the surface; moreover, some much smaller elements were present, also disc-shaped. Fuchsin revealed in some a minute central nucleus. Round forms were also present, and deformed red corpuscles in the most varied shapes. The retinæ could not be examined.

The diagnosis of pernicious anæmia was made. Iron and quinine were given, also ergotin injected, but without any benefit, and the patient died in a fortnight. There had been occasional passage of a little blood per rectum, and the stools had been clayey.

The *post-mortem* examination is elaborately described, and may be thus abbreviated. Extreme anæmia was revealed everywhere; fatty enlargement of pancreas; enormous fat-deposits about intestine; heart much enlarged, especially right side; much fat-deposit here as everywhere else; valves normal. The lungs showed nothing characteristic. The gall-bladder, which was enlarged and distended with bile, contained 170 gall-stones, the greater part facetted; liver enlarged with yellow-green spots on section; acini mapped out; lower border of liver thick and rounded off. But there had been no impediment to the passage of the bile apparently. The marrow of the humerus was dark red-grey, no yellow substance being present. It was also extremely soft.

Remarks.—Thus the diagnosis was so far verified by the autopsy. The case was typical, except for the absence of capillary hæmorrhages. The author is of opinion that some preceding liver disorder caused circulatory disturbance of that organ and the formation of gall-stones, and that a vicious circle was thus set up. The biliary acids set up a hæmo-globinæmia, and the hæmoglobin and bile-constituents together caused blood destruction, with the 'symptom-complex' of poikilocytosis and pernicious anæmia. Every cholelithiasis does not result thus, it is true; but here a chronic irritation existed without real obstruction. Finally, Dr. Georgi doubts the existence of 'essential' pernicious anæmia, *i.e.* without any evident pathological changes.

As a supplement to the above case Professor Ewald gives, in the *Berliner Klin. Wochensch.*, No. 45, the following case under his care in March 1886 (to May).

March 29.—Herr B., a cigar maker, complained of extreme anorexia, loathing all food. A slim man, with icteric tint; nothing abnormal discovered by physical examination; diagnosis catarrhal icterus; the blood showed no coarse changes; no fever. April 5.—Very weak; occasional vomiting; nutrient enemata ordered, also quinine and iron in suppositories. April 17.—Lay in bed; icterus; no enlargement of liver or spleen made out; retina normal; blood showed numerous white corpuscles, broken up corpuscles and tabloids. May 15.—Patient much worse; waxy pallor; slight œdema of ankles; left lobe of liver slightly painful on pressure; anæmic bruits over heart and neck. Blood examined; numerous poikilocytes; some red corpuscles, nucleated, almost all enlarged. May 20.—The œdema increased. Transfusion was performed: 180 grm. (about 6 oz.) of blood from a healthy man. For a day or two the patient seemed better, but he died on May 25.

Autopsy.—Spleen not enlarged, of normal structure; liver very little enlarged; brownish yellow on section; acini mapped out, but confusion with yellow atrophy impossible. Gall-bladder held bile, no biliary calculi; ductus choledochus free; no peritonitis; other organs anæmic, but not otherwise abnormal.

Professor Ewald remarks that the number of cases of pernicious anæmia, together with jaundice, is extremely small, and, in opposition to Dr. Georgi, the author is of opinion that a rapidly advancing degeneration of the blood, causing the general symptoms of pernicious anæmia, may go on to a fatal issue without any primary derangement of the liver, or any gall-stones. Experiments show that destruction of blood-corpuscles—as after AsH_3 or toluylen-diamin—causes conversion of free colouring matter into bile-pigment. If this conversion occur in the liver, and not in the blood, icterus may occur from excess of bile-pigment there, not, however, a true hæmatogenous icterus, nor an icterus of stasis (stauungsicterus) from diminished bile-flow. The setting free of hæmoglobin caused the icterus in this case. The author refers to Professor Osler's paper 'On Certain Problems in the Physiology of the Blood-corpuscles' (*Brit. Med. Journal*, May 1886), also to Maragliano (*Berliner Klin. Wochensch.*, No. 43, 1887). Perhaps the excessive smoking of cigars may have set up the blood-destruction. (*See* Wood's *Therapeutics*, 2nd ed., p. 342.) Professor Ewald thinks that progressive pernicious anæmia is a symptom which may have several causes, and not a disease *sui generis*.

E. J. EDWARDES, M.D.

ARTICLE 4.

BUMM ON COMPOUND GONORRHŒAL INFECTION.*

DR. BUMM, of Würzburg, whilst admitting the serious consequences of neglected gonorrhœa in women, does not agree with certain writers who exaggerate the evil results of that disorder. He urges a thoroughly scientific system of investigation, by which the pathology of gonorrhœa, and the microscopic character of the discharges can be definitely determined. Dr. Bumm begins with a postulate, the gonococcus; he believes both in its existence and in its specific influence. His observations have led him to establish a theory of what he terms mixed or compound infection (*Mischinfection*); indeed he claims to have detected more than one form of compound infection. By the term he employs he

* 'Ueber gonorrhoische Mischinfectionen beim Weibe.' *Deutsche Med. Wochensch.*, Dec. 8, 1887.

signifies not so much the accidental simultaneous presence of two specific germs in one patient, such as occurs in the case of erysipelas during tuberculosis, as the invasion of a specific micro-organism when the tissues in which it settles have become specially favourable for its reception through the ravages of another micro-organism. Thus the bacteria of pneumonia are said to destroy the epithelium of the pulmonary alveoli, filling them with an exudation which forms a cultivating fluid for the bacillus tuberculosis or for pyogenic organisms; hence follows phthisis or abscess in the lung-substance. Dr. Bumm finds that, in a similar manner, the gonococcus prepares the mucous membrane of the genital tract in woman for other germs which could not invade the same structures in a healthy subject.

The suppuration of Cowper's glands after gonorrhœa is entirely due to the invasion of pyogenic staphylococci. Bumm declares, from clinico-pathological evidence, that the entry of simple gonorrhœal discharge into the ducts of those glands generally destroys their glandular elements and gives rise to cystic degeneration, but not to suppuration. On the other hand, when pyogenic staphylococci enter the glands, in a case of gonorrhœa, suppuration occurs, and the acini and the connective tissue around the glands become infiltrated with colonies of the micro-organism which entirely supplant the gonococci. The urethral follicles are subject to a similar compound infection. Dr. Bumm believes that gonorrhœal cystitis is pathologically of a similar nature. The gonococcus cannot readily penetrate the stratified vesical epithelium, but it favours the entry into the bladder of another coccus, distinguished by its micro-chemical characters.

Turning to the upper part of the genital tract, Dr. Bumm notes that the gonococcus proper only attaches itself to the mucous membrane. This is fortunate, otherwise almost every woman who has had the misfortune to contract gonorrhœa would suffer from extensive pelvic inflammation, the parametritis or pelvic cellulitis of gynæcologists. That formidable complication represents, according to Bumm, compound infection. In two cases of gonorrhœal parametritis, where abscess formed, he detected in the pus the staphylococcus aureus in great abundance. That germ enters the pelvic connective tissue through erosions in the cervix which communicate with lymph spaces, and the gonococci infecting the cervical mucous membrane favour the deeper invasion of the more dangerous germ. Dr. Bumm has also investigated cases of gonorrhœal parametritis where there was no suppuration, the termination being resolution and formation of cicatricial tissue. He made an exploratory puncture in two cases, and found the fluid entirely free from any kind of germ. The parametritis was due in these cases to mere irritation, and not to infection of the connective tissue.

Most important is the statement of Dr. Bumm that the higher the gonorrhœal infection extends above the cervix, the further it must lie from the vagina and vulva, favourable receptacles for all kinds of germs, and therefore the less will be the chance of compound infection. As a rule very few germs besides the gonococci can be distinguished in true gonorrhœal uterine discharge; in the case of the tube hardly any are to be found. Hence it is in the tubes that the pure specific action of the gonococcus may best be studied. Purulent inflammation of the tubal mucous membrane occurs, but the subjacent connective tissue escapes. The gonorrhœal tubal pus runs out of the ostium into the peritoneal cavity. Instead of violent, suppurative, universal peritonitis, a circumscribed inflammation rapidly seals up the tube, and the patient is saved from a deadly complication, but suffers thenceforth from pyosalpinx in its complete form, the tube being occluded and becoming more and more distended. [The reporter has repeatedly demonstrated this salutary complication, namely the sealing up of the fimbriated extremity of the Fallopian tube in cases of extension of inflammation of the genital tract from the vulva upwards to the ostium. Dr. Bumm implies that if the true pyogenic micrococci (instead of the gonococcus) existed in the tubal discharge, the ostium would not be sealed up by exudation, or, even if it were so occluded, the micrococcus would pass through the exudation and cause general suppurative peritonitis.—*Rep.*] The effects of a true pyogenic micrococcus on the peritoneum are seen in cases of bursting of a puerperal parametritic abscess into the peritoneal cavity. Pyogenic streptococci then set up fatal changes with great rapidity. The gonococcus, on the other hand, is aseptic, and only irritates the peritoneum, so as to become encapsuled. Dr. Bumm doubts if any authentic case of compound gonorrhœal infection of the tubal mucous membrane has been noted. [It is difficult to see, according to his theory, why the rupture of a pyosalpinx should so often prove deadly. As the pus is, in Dr. Bumm's opinion, aseptic, why should it not become encapsuled in this case, as when it simply runs out of the ostium? Hæmorrhage alone, on this supposition, could be the cause of death.—*Rep.*]

Another form of compound gonorrhœal infection is noted by Dr. Bumm as occurring in female subjects, and it is for this reason that he names his paper 'Mixed Gonorrhœal Infections.' Already has it been observed, though in a limited series of cases, that tubercular changes in the epididymis and its neighbourhood follow gonorrhœal infection. Dr. Bumm believes that tuberculosis of the tubes often arises from the same cause, this theory explaining the origin of those tubercular masses which are sometimes found in the tubes, although absent from the lungs, lymphatic glands, or any other part of the same subject. The inspissated pus of an old pyosalpinx is a good cultivating medium for the bacillus tuberculosis. Dr. Bumm describes the case of a sempstress whom he treated for gonorrhœa of the cervix and repeated attacks of parametritis (*sic*) on the left side. Her condition greatly improved, she married, and two years later she died in his hospital. Isolated tuberculosis of the left tube was discovered. [This might indicate that the original disease was perimetritis, as parametritis would not necessarily imply previous extension of the gonorrhœal infection to the tubal mucous membrane. However, the infection might readily extend to the tube after it had set up parametritis, pyogenic or simply irritative, in the manner already noted.—*Rep.*] The patient had never conceived, and her husband was phthisical.

In conclusion Dr. Bumm notes that it was in female subjects that the first researches were made to determine the nature of the fluid found in the synovial cavity of a joint affected with gonorrhœal rheumatism. Instead of gonococci being found, as expected, true pyogenic cocci were discovered. Dr. Bumm believes that this phenomenon is to be explained by his theory of compound infection. The

genito-urinary mucous membrane, damaged by gonococci, allows the entry of pyogenic organisms into deeper tissues; but it remains to be explained why the latter make for the articulations, and especially settle in the knee-joint. ALBAN DORAN.

ARTICLE 5.

NOEGGERATH ON LATENT AND CHRONIC GONORRHŒA IN WOMEN.*

DR. NOEGGERATH declared fifteen years ago that ninety per cent. of husbands who had contracted gonorrhœa before marriage, communicated it to their wives. This extreme statement has been retracted by its author, who has spent much time in calmly investigating his subject, and has recently demonstrated the frequency of latent gonorrhœa by summarising evidence which appears to be, in most respects, trustworthy. [A great truth, at least, lies at the base of his theories. Gonorrhœa in women is not a relatively mild disease, for it may set up complications which cripple or kill the patient, as in the case of the same disease when it attacks the male. This fact is imperfectly recognised. In association with child-bearing, chronic gonorrhœa is peculiarly dangerous; hence the frequency of serious disease of the internal organs in married women who have contracted that disorder, and the comparative rarity of secondary results of gonorrhœa in the class of females to whom the existence and persistence of the disease is mainly due.—*Rep.*]

By latent gonorrhœa in women, Dr. Noeggerath signifies the sudden development of acute or subacute symptoms of the disease on the occasion of some unaccustomed stimulus to the genitals, after the absence of any such symptoms for many years. The first difficulties in his path are statistical evidence and the detection of the gonococcus. The ravages of gonorrhœa are more severe in certain cities than in other towns. Winkel could not discover a single fatal case of gonorrhœal salpingitis and peritonitis in Dresden, in the course of eleven years. He noted three cases within four years in Munich, where he found that severe, though not fatal cases of those complications were frequent. The chief difficulty in searching for gonococci in the lochia, or in children with blennorrhœa, lies in the fact that women with chronic gonorrhœa are often sterile, or bear no child after their first delivery or abortion. It is also to be noted that Neisser found no gonococci in 63 out of 143 cases of chronic gonorrhœa in males, Schwarz found no such germs in 35 out of 79 similar cases. Out of 92 cases of blennorrhœa neonatorum, Kroner failed to find the gonococcus in 29. In 17 of the mothers of these 29, the gonococcus was absent from the lochia. The gonococcus may readily be overlooked by the inexperienced; but the evidence that the discharge remains contagious after the disappearance of that germ is strong.

Dr. Noeggerath also dwells upon the frequency of latent gonorrhœa in the male; in one case he squeezed a drop of pus from the meatus of a man who had been apparently cured of the disease fourteen years. In a series of two dozen married women subject to acute and recurrent perimetritis, all the husbands appear to have had gonorrhœa, twelve within three months of marriage, two not for ten or eleven years. [These observations, however, contain several evident sources of fallacy.—*Rep.*] Dr. Noeggerath goes so far as to say that about four cases of latent gonorrhœa in virgins have been noted, vulvo-vaginitis (where gonococci are found in the discharge), persisting after infancy and beyond the age of puberty. In cases of puerperal perimetritis, where the local signs have persisted long after the acute stage has passed away, he suspects gonorrhœal complication. In cases of the same disease which have proved rapidly fatal, the tubes have displayed evidence of disease far older than the last labour and pregnancy. At least, Saenger has proved that evidence of acute gonorrhœal infection is often developed for the first time during convalescence from parturition; in fact, he found this to be the case in 35 out of 230 cases. Recovery from very severe yet uncomplicated puerperal perimetritis seems to be rapid and complete.

Lastly, Dr. Noeggerath dwells on the diagnosis of chronic gonorrhœa in women. The following symptoms, if three, four, or all be present in the same case, are highly characteristic. (1) The sickening of a healthy woman shortly after marriage; a disorder of the genitals occurring which affects her constitution to an extent out of all proportion to the local changes. (2) Puriform discharges and absence of deep ulcers, granulations, or new growths; or a clear, scanty discharge with minute bright-red erosions of the os externum. (3) Catarrh of Cowper's ducts. (4) Small, pointed condylomata around the entrance to the vagina. (5) A circle of similar condylomata around the anus. (6) The presence of granular colpitis. (7) Evidence of salpingo-peritonitis, or (8) of glandular ovaritis. ALBAN DORAN.

* *Deutsche Med. Wochensch.*, Dec. 8, 1887.

ARTICLE 6.

PALADINO ON THE DESTRUCTION AND CONTINUOUS RENEWAL OF THE OVARIAN PARENCHYMA.*

IN various papers the author has endeavoured to prove that contrary to the generally received opinion two processes are constantly taking place in the ovary, the first being one of multiple degeneration, by which the ovarian tissues in whatever stage of development are destroyed; the second of regeneration, a complete neogenesis of tissue by a repetition of the primitive formative processes. In the paper whose title is given above, he states that his most recent researches have confirmed his former statements and brought to light further points. Contrary to Waldeyer's opinion he believes that there is no reason to suppose that the ovaries of women and apes differ from those of other animals with regard to these processes. The conclusions arrived at in his paper are as follows:—

I. The continuous destruction of the ovarian parenchyma is multiple, and the most common methods are hyaline, fatty, and granular degeneration, direct atrophy, and in follicles more or less advanced in development or completely matured by false corpora lutea. The hyaline degeneration attacks sometimes the epithelium of the ovarian tubes, sometimes that of the follicles, as well as the ova, and is met with at all ages. The hyaline substance colours with iodine. The fat which is formed by the corresponding degeneration presents itself under the form of more

* Ulteriori ricerche sulla distruzione e rinnovamento continuo del parenchima ovaria nei mammiferi. Pel Prof. Dr. Giovanni Paladino. (*Anat. Anzeig.* Jahrg. ii., No. 27, s. 835.)

or less large-sized drops, and exceptionally under that of crystals. The most simple form of direct atrophy is represented by atrophic follicles, and compressed glandular tubes reduced to thin, scarcely recognisable, cords, which then disappear. In other less frequent cases there is accompanying disorganisation of the nuclear form, sometimes in the ova, sometimes in the epithelium of the follicle.

II. Corresponding to the destruction is a continuous and complete neogenesis by invagination of the germinal epithelium. The regeneration is not universal, but occurs here and there over the surface of the ovary. In women the form and position is significant, being a kind of crateriform increase. The sinking of the ovarian tubes does not occur in regular lines perpendicular to the surface, but they make their way through the bundles of connective tissue forming the ovarian stroma. This regeneration takes place continuously from birth to sterility.

III. The destruction and regeneration of the ovarian parenchyma do not take place in the same proportions in different species and at different ages, but are in strict and direct ratio to the fertility of the species and, *ceteris paribus*, in inverse ratio to the age of the individual.

IV. The demonstration of these processes conflicts with many received opinions. Amongst other things it shows that a very large number of ova are destroyed without coming to maturity. The questions of the growth of ovarian tumours and of sterility in the female should be studied from the point of view of these new observations.

V. The germinal epithelium which covers the ovarian surface is not always a simple stratum, nor of the same form. The lamellar, flattened form indicates an epithelium of repose, or of senility.

Like the epithelium, the ovarian stroma varies in different animals and in different parts of the same ovary.

VI. In the medullary portion it is necessary to distinguish : 1. residual tubes of the segmental organ ; 2. tubes of the ovarian parenchyma with eccentric course.

VII. The genesis of the ova and of the epithelium is common, and following the ordinary type of the glands it arises from the deeper parts of the superficial epithelium. The primordial ova multiply themselves by caryokinesis. In general, two periods must be distinguished in the life of the ovum ; in the first it increases as a primordial ovum, in the second it becomes perfect as an ovum properly so called.

VIII. The ovarian follicle does not always primarily commence as a single cavity or a simple formation, but as a quite irregular space, commencing its developments at the points of ramification of the ovarian glandular tubes, so that this manner of genesis of the Graafian follicles is a proof of the tubular structure of the ovary in women and in general amongst mammals. Follicles of all stages are to be found at different periods of life. In the old they undergo particular changes, which require a senile form of the follicle to be distinguished. The epithelial cells of the parietal and ovular granulosa are of very different shape. Whatever may be their figure they are furnished with prolongations which for the most part ramify, and are connected with analogous prolongations from the neighbouring cells.

IX. All the histological components of the ovary present caryokinetic appearances during maturation. It is therefore erroneous to deny caryokinesis in the germinal epithelium, in the epithelium of the germinal tubes, and in the primordial ova of mammals.

X. The signification of the corpus luteum ought to be enlarged in so much as it serves first to prepare for and to complete the bursting of the follicle, after which follows a classic process of cicatrisation or of repairs of the burst ovisac. The old distinction of true and false corpora lutea is revived in modern terminology, but with different signification, since by true corpora lutea are meant those which follow upon a burst follicle, and by false corpora lutea, those which develop in unburst follicles, whether they have gone on to complete development or have run an abortive course. It is necessary to distinguish a period of preparation and a period of development of the true corpora lutea. The period of preparation is represented by changes in the follicular parietes, by maturation or more properly by accumulation of large nucleated cells, rich in protoplasm and polyhedral, in the two strata of the theca folliculi. The period of the development of the corpus luteum follows on the preceding, and commences after the bursting of the follicle. It consists in the activity of the elements accumulated in the theca during the period of preparation, which increase, more or less rapidly, and in some animals tumultuously, until they occupy the whole follicle, limiting and filling the blood-clot. The vascularity increases contemporaneously. The completely developed corpus luteum fills the former follicular cavity, and is always larger than the mature follicle, since its limits are not those of the follicular cavity, but of the external surface of the theca folliculi. The corpus luteum is a connective-tissue new formation, which is eminently vascular. The granulosa and the blood-clot take no part in its formation. The connective elements accumulate by migration, or by indirect division. Capillaries originate by budding from the pre-existent ones, but not independent of caryokinesis. The corpus luteum, after its progressive course runs a regressive one, and thus is gradually destroyed. Besides direct atrophy, indirect is represented by fatty, pigmentary, and hyaline degeneration.

XI. The ovary is everywhere rich in vessels. The arteries of the medullar portion have a well, though irregularly, developed intima, which is of complex structure, that is to say, under the endothelium is a zone formed of a reticulum of elastic fibres, with small and irregular meshes, within which are placed muscular cells, disposed longitudinally in the direction of the vessels.

XII. Accessory ovaries may be represented by a fine stratum of ovarian parenchyma, which prolongs itself in the tract of the ovarian ligament. Under a stratum of germinal epithelium are found epithelial tubes and primordial follicles.

Bertram C. A. Windle, M.D.

Article 7.

BOURGET ON THE PTOMAÏNES.

Dr. Louis Bourget in his thesis on the ptomaïnes (abridged in *Le Progrès*, No. 22, Nov. 20, 1887) writes as follows :—The ptomaïnes, which form in great abundance during the decomposition of animal matter, belong, according to Gautier, to the series of the pyrides and hydropyrides. They represent oily, very viscid, colourless, highly alkaline liquids, and form, when saturated in equal proportion with strong acids, crystallisable, easily disintegrating, salts. They

possess a very penetrating odour, and readily oxydise in the air.

Parvoline, $C_9H_{13}N$,* is obtained from the putrefying flesh of the mackerel and the horse. It is an oily base, of amber colour, and smells like hawthorn; it is but little soluble in water, but very much so in alcohol, ether, and chloroform. Its boiling point is at 188° C (370°·2 Fahr.).

Hydrocollidine, $C_8H_{13}N$, an oily liquid, produced by the putrefaction of meat.

Collidine, $C_8H_{11}N$, is one of the most abundant bases, has a strong smell of syringa, and is extracted by chloroform. According to Nencki, this base is identical with the collidine, first discovered by him. Guareschi and Mosso, following the method of Gauthier, repeatedly found a base of the formula $C_{10}H_{15}N$. Brieger asserts that ptomaïnes only form during the first stage of putrefaction, and that afterwards they perish. But the fact that it has been possible to extract them from a body eighteen years after death, seems to invalidate this opinion. Brieger has investigated and isolated the following ptomaïnes.

Peptotoxine is obtained from fibrine peptonised by the gastric juice, without decomposition having taken place. It is a very permanent substance, and gives with strong reagents the same reactions as the vegetable alkaloids. It dissolves in amylic alcohol, and very readily in water, but is insoluble in ether, benzine, and chloroform. Millon's reagent (nitrate of mercury) forms with this base a white precipitate, which, by boiling, turns into deep red. This base is extremely poisonous.

Neuridine, $C_5H_{14}N_2$, is a diamine forming long needles like urea. Chlorohydrate of neuridine is very soluble in water, but, when pure, insoluble in absolute alcohol, ether, and chloroform. It is the most frequent base in animal tissues. It is found in rotten cheese and in decomposing gelatine, which is very rich in this base. Neuridine occurs also in the fresh human brain. It is most abundant on the fifth and sixth days, and disappears after the eighth day. It forms precipitates with several strong reagents. Its picrate is almost insoluble.

Neuridine is perfectly innocuous, and is only poisonous as long as it is alloyed with impurities of putritive origin.

Neurine, $C_5H_{13}NO$. The putrefactive neurine is extracted from the lees after the elimination of the neuridine. It is excessively poisonous, and resembles muscarine in its effects. It appears in the form of very deliquescent needles, and is an oxyhydrate of trimethyl-vinyl-ammonia, a very soluble base. It is obtained by boiling cerebral matter (lecithine, protagon) with baryta-water, and derives itself from choline (bilineurine or sincoline), $C_5H_{15}NO_2$, by losing one molecule of water. The *choline* is found in the brain and in the yolk of eggs, in combination with phosphoro-glycerylic acid, and can also be obtained from trimethyl-amine and from oxy-ethyl in aqueous solution. It is an oxyhydrate of trimethyl-oxyethyl-ammonia. By treating this choline with hydro-iodic acid and oxide of silver, one molecule of water is abstracted, and a neurine is produced which possesses the same properties as the neurine extracted from putrefying meat.

Animal ethylene diamine, which is extracted from decomposing codfish, is highly poisonous. There is, besides these, in the lees a substance of the same physiological properties as muscarine, and another, which Brieger calls *gadanine*, but which does not seem to be toxic.

The *cadaverine*, $C_5H_{16}N_2$, appears already on the third day, rapidly increases, and abounds proportional to the duration of the putrefaction. It gives the following reactions: with iodised iodide of potassium and with bi-iodide of bismuth and potassium, a brown precipitate; with picric acid yellow needles; with ferrocyanide of potassium and perchloride of iron a blue colour. It is a thick transparent fluid, which greedily absorbs the carbonic acid of the air, forming in conjunction with it crystals. It likewise forms with strong acids beautiful crystals, which are soluble in water and absolute alcohol. Its chlorohydrate is very hydroscopic.

Putrescine, $C_4H_{12}N_3$ (bimethyl of ethylene diamine), is not found in perceptible quantity before the eleventh day of putrefaction. It is a clear liquid of sperma-like odour, boils at a temperature of 135° C. (255° Fahr.), and distils without disintegration in presence of caustic potash. It forms with acids beautiful crystalline salts, which are not affected by exposure to the air. It is very soluble in water.

Saprine, $C_5H_{16}N_2$, is a centesimal compound analogous to the former, from which it only differs by some chemical and physiological properties of its salts.

The last three compounds do not possess any appreciable toxic action.

The *mydaleine* forms as early as on the seventh day of putrefaction, but no sufficient quantities for examination of its properties can be extracted before the fourth week. The definite formula of this base has not yet been discovered, owing to the difficulty of obtaining it in pure condition. The investigation of its salts, nevertheless, shows that it is a diamine ptomaïne, much resembling the preceding. Like these, it possesses a great reducing power, and gives with salts of iron and ferrocyanide of potassium an immediate and very copious precipitate of Berlin-blue colour.

It produces increase of temperature and of the secretions, especially of the intestinal discharges. It dilates the pupils, respiration and circulation become accelerated, after which, provided that the dose was not too large, the functions gradually and slowly become normal again; in the contrary case paresis of the anterior and posterior extremities (in animals) takes place. Death is ushered in by a rapid fall of the temperature, and the heart stops during diastole. An injection of 0·005 of a gramme (one-twelfth of a grain) proves fatal to cats.

Poehl found in damaged flour, containing ergot of rye, a toxic base, to which he ascribes the convulsive and gangrenous symptoms which characterise poisoning by this fungus.

The germs of putrefaction produce, according to the medium in which they develop, different ptomaïnes. The bacilli which permeate horse-meat produce neurine; those in the flesh of fish, animal muscarine or ethylene diamine.

Nencki has demonstrated that the presence of free oxygen considerably assists the process of putrefaction.

The various stages of cadaveric putrefaction are marked by the formation of different basic compounds. Thus, *e.g.* the choline disappears, to be replaced by trimethyl-amine. In one of Brieger's experiments it required seven days of putrefaction before the disappearance of the choline was com-

* Brieger refuses to admit the correctness of Gautier's formulæ for Parvoline and Hydrocollidine. He even maintains that their existence is only due to the analytical method of the chemist.

pleted, whilst the neuridine could be discovered until the fourteenth day, after which no trace of it was left. The formation of an extremely poisonous base is coincident with the disappearance of choline, which seems to confirm the theory that neurine is a derivative of choline.

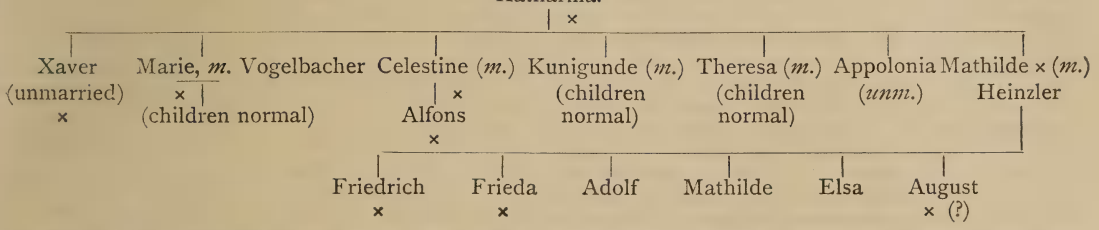
FERD. ADALB. JUNKER, M.D.

ARTICLE 8.

FACKENHEIM ON A CASE OF HEREDITARY POLYDACTYLISM WITH DENTAL ABNORMALITIES.

IN an inaugural dissertation Dr. Fackenheim gives an account of an interesting family in which two anomalies are hereditary. On the father's side is polydactylism, both of the hands and feet, on the mother's anomalous dentition.

The genealogy on the mother's side stands as follows, the affected members being marked thus × :—



Katharina, the grandmother, had only two upper pointed teeth in place of the incisors and two molars. Her children were situated as regards their teeth as follows. Xaver, unmarried, is somewhat similar to his mother; so is Marie, who has normal children. Celestine is similarly affected, and so is her son Alfons, who possesses only four teeth, with one first molar. Kunigunde and Theresa, as also their children, have the normal dentition; so also has Appolonia, who is unmarried. Mathilde has six exceedingly large and pointed teeth, like canines, with wide gaps between, which represent the incisors, the remainder of her dentition being normal. Mathilde married Heinzler, in whose family polydactylism is hereditary. Of their children Friedrich (æt. 11) has the most singular dentition of this generation. The lower incisors are in his case completely absent; in place of the upper incisors are two conical teeth. The remaining teeth are normally formed. The alveolar border of the inferior maxilla is thin and rudimentary in the situation of the defective teeth. This is less marked in the superior maxilla. There is no trace of a frænum linguæ, but otherwise the mouth is quite normally formed. It should be noted that these teeth belong to the milk dentition, no permanent teeth having appeared. The defect is already commencing to exercise a marked effect upon the contour of the face, and undoubtedly influences the speech. The sister, Frieda (æt. 14), is not quite so deficient as her brother, but the separate teeth are not so regularly formed as his. Like the brother, she still possesses her milk dentition. In the upper jaw, in place of the incisors, are two pointed or crescentic teeth, with their apices towards the middle line. In the lower jaw the incisors are replaced by three irregularly conical teeth, the central one being somewhat behind the other two. The remaining teeth are fairly normal, but have considerable gaps between them. There is a very small frænum linguæ, but no other oral abnormalities. In both children the teeth made their appearance at the proper time. Both of these children also inherit the polydactylism of the father. They are thoroughly healthy, and have never suffered from any severe illness. The alveolar processes of the youngest child, August, are thin, from which the mother, reasoning from what she saw in the other children, confidently asserts that he also will exhibit similar anomalies. Dr. Fackenheim finally points out that the rudimentary condition of the alveolar processes in these, children renders it impossible that the lacking teeth are retained in the jaw.

[The reporter has to thank Dr. Fackenheim, of Eisenach, and Professor Thomas, of Breisgau, for a copy of the account of this interesting family, and for two photographs specially sent to him of Friedrich and Frieda. As far as can be judged from these, the teeth which represent the incisors in these cases are of the conical shape met with in supernumerary teeth, this being especially true of the central lower incisor in Frieda. In a paper by the reporter and Mr. Humphreys (*Journ. of Anat. and Phys.*, October 1886) on 'Man's Lost Incisors' are various cases of suppression of incisor teeth. In four cases a supernumerary tooth was substituted for one incisor; in six cases two supernumerary replaced normal, and in four there were only three incisors, one of which was of the supernumerary form in two cases, and of the supplemental in two. The condition described by Dr. Fackenheim, apart from its hereditary aspect, is one of great interest, but especially so as the family abnormalities of the two sides are found to be combined in the children.—*Rep.*]

BERTRAM C. A. WINDLE, M.D.

ARTICLE 9.

RICHARDSON ON THE CLINICAL HISTORY OF SCARLET FEVER.

IN the *Asclepiad*, October 1887, p. 301, Dr. B. W. Richardson contributes an essay on the subject of scarlet fever. In regard to the occurrence of scarlet fever at different periods of life, some writers have stated that the disease is rare in infants at the breast, and even under two years of age, but the author cannot verify this by his experience, as out of over 12,000 cases under five more than 4,000 occurred under two years of age. The most frequent period is between the ages of three and four years; it becomes more rare after the fifth year, and is almost absent after the fortieth. As to sex there is no difference in the number attacked. The next point considered is the influence of meteorological conditions; here valuable information is given as regards to season only. It is most common in autumn, next in the summer, next in the winter, and least so in the spring. Cases occurring in the spring, even though of malignant character, are

more likely to recover than at other seasons. A second attack in the same individual is rare, but the author himself has had the fever thrice during his life. In considering the mortality two questions are noticed: (*a*) the influence of locality; (*b*) the relative mortality as compared with other diseases. The mortality is decidedly greater in towns than in rural districts; as to the relative mortality, it is found that scarlet fever stands highest on the list, though a few years ago it would seem to stand second to typhus fever, but in those days no distinction was drawn between typhus and typhoid. As to the different types of scarlet fever, the author remarks that it will be a good day when the three so-called distinctive forms, viz., scarlatina simplex, anginosa, and maligna, are considered as one. The pathology of this disease, as derived from the symptoms, can only be read of as indicating a true inflammatory condition. The poison of the fever is the most subtle of all the zymotic poisons. It takes effect in a very short time, its period of incubation being from a few hours to four days. It travels on material objects with infinite ease, and may be laid up in such for any period. The poison is almost certainly solid, and is usually received by the infected subject through the lungs. The mode in which its effects are produced on the economy is another point of deep interest, and involves the whole question of animal fermentation or zymosis. Dr. Richardson is in favour of the supposition that on the entrance of certain organic products into the blood there is set up a change which gives rise to special symptoms, but differs from others as to the mode in which this process is conducted. Zymosis, instead of being a process foreign to the body, is in truth a natural act, always going on, and essential to life; the combination of oxygen with carbon and hydrogen in the tissues being due to a decomposition of the respiratory parts of the blood by the fibrine and corpuscles of the blood acting on the ferment, and the natural heat of the body is a consequence of this natural zymotic process. Accepting this view, it is suggested that the action of an organic body, entering from an infected organism into a healthy organism, is rather to modify or render imperfect the natural zymosis of the healthy organism than to excite a primitive zymosis.

This view is supported almost to demonstration by the fact, that if, to blood charged with amylaceous compounds, oxygen be freely supplied, carbonic acid and water with elevation of temperature can be obtained as products; while if another body in putrescency, which more or less destroys the combining power of the oxygen, be brought into contact with the blood, the result is that the process is either stopped altogether, or is so far arrested that the ordinary products, carbonic acid and water, are replaced by more complex acid products, the result of an imperfect combustion. Whether the poison thrown off by an infected subject excites in the healthy subject an acid zymosis, or modifies the natural zymosis, the results are the same in regard to symptoms. The symptoms are caused, not by the propagation of vital germs, but by the development of a chemical body, which, by its presence, gives rise to the symptoms, and by its ultimate elimination frees the system of all the symptoms, except such as are secondary in their nature. Thus, in regard to scarlet fever, there are required for its demonstration—first, a susceptible blood; secondly, the introduction of a foreign body; and thirdly, a modified zymotic change in which the ternary compounds are resolved into a soluble oxy-acid substance, which, passing into the systemic circuit and brought to the skin and mucous membrane as eliminating surfaces, acts there and everywhere as a direct irritant, and sets up those inflammatory changes by which the disease in its early stages is specially characterised. Dr. Richardson believes that organic chemistry will at some time be able to prove that the organic poisons, by which the various diseases of epidemic type are propagated, can be produced in the laboratory by a synthetical process of research conducted on blood; that these poisons will be put into our hands as substantive things and labelled in our museums as prussic acid and the alkaloids are now presented. With regard to treatment, the main object should be the production of a free diaphoresis, and to prevent the deposition of fibrine in the right cavities of the heart by the administration of ammonia, especially in severe cases. With reference to local treatment to the throat, the following deodorising gargle is recommended: Solution of peroxide of hydrogen containing ten volumes of oxygen, six ounces; tincture of myrrh, half an ounce; glycerine, one ounce; rose water, five ounces. This gargle may be used *ad lib.*; it is very refreshing, and effectually removes all offensive secretions. RICHARD NEALE, M.D.

ARTICLE 10.

SEMENOFF ON CARBOLIC ACID IN DIPHTHERIA.*

DR. A. J. Semenoff, of Petrovsk, in Dagestan, details (*Proceedings of the Caucasian Medical Society*, Nov. 17, 1886, p. 28) ten successive cases of severe diphtheria in children, aged from 1½ to 10, of which the first five were treated by perchloride of iron, chlorate of potash, quinine, benzoate of soda, tincture of iodine, turpentine, and tracheotomy, and all ended fatally, while in the remaining five (of which two were very severe) the treatment included painting the fauces with either concentrated carbolic acid (1 case) or a 10 per cent. glycerine solution of the acid, and every one and all rapidly recovered. In two patients of the latter group the nasal cavity was also affected, and was similarly painted with carbolic glycerine—in one case with a 10 per cent. solution from the beginning, but in another at first with a 2·5 and 5 per cent. one. In all these cases gargling with boracic acid and quinine internally were simultaneously employed. The carbolic treatment was resorted to in three cases on the second day of the disease, in a fourth on the third, and in a fifth on the eighth. The painting with a concentrated acid was repeated once or twice daily, while that with carbolic glycerine was applied every four, three, or two hours. In one of the cases the morbid process was arrested, and the temperature fell to the normal level, after one day's treatment; in two cases after two days, and in the remaining two after four days' painting. All the patients were well and sound by the end of a week from the beginning of the treatment. With equally successful results Dr. Semenoff used a 10 per cent. carbolic glycerine in other three cases of faucial diphtheria in a lad of 16, and in the cases of an elderly couple. In none of the patients were any

* SEMENOFF, DR. A. J.—On the Treatment of Diphtheria with Carbolic Acid during an Epidemic at Petrovsk, in Dagestan, in 1885–86. (*Proceedings of the Caucasian Medical Society*, Nov. 17, 1886, p. 28.)

toxic phenomena ever observed; even 'the urine remained of an ordinary usual dark yellow colour as seen in febrile patients generally.' The author thinks that so beneficial effects of the carbolic treatment decidedly speak in favour of Oertel's theory of the disease, according to which the latter in the beginning represents a purely local process, a 'diphtheritis,' and becomes a constitutional one, a 'diphtheria,' only in the course of time. 'Carbolic acid,' Dr. Semenoff says, 'destroys the focus of infection and arrests any further proliferation and dissemination of the pathogenic microbe. . . . Only Oertel's theory may explain this striking fact, that the disease can be practically cured in twenty-four hours, so that the patient, by the end of this short time, becomes quite another being, almost unrecognisable.' According to Dr. Semenoff, Calvert (in 1863)—while according to Dr. Bakhütoff, an American practitioner, Kempster (in 1868)—first began to use carbolic acid in diphtheria. Later on, Wegner also highly recommended gargling with, and pulverisation of, a 1 : 300 solution of the acid. In 1875 Dr. Theodor Schueler, of Cuestrin, having carried out three parallel series of observations, found that the group of cases treated by carbolic acid gave by far better results (4·3 per cent. of deaths) than that treated by chlorate of potash (14·6 per cent. of deaths), and a third one treated by salicylic acid (46·0 per cent. of deaths).

Since 1880, up to this date, Professor Oertel has ardently and effectively advocated the treatment of diphtheria by a 5 per cent. solution spray of carbolic acid (*vide* the LONDON MEDICAL RECORD, May 1881, p. 202). In the *Il Morgagni*, No. 5, 1883, Piccoli stated that he had treated 27 diphtheritic children by painting the affected parts every two hours with a solution of 1 part of phenol in 20 parts of water with 3 parts of alcohol; one child died, the remaining recovered, while the mortality amongst the diphtheritic children, treated at the same time with other means, by other local practitioners, 'was about 30 per cent. greater.' During a moderately severe epidemic, Dr. Goetz (*München Med. Wochensch.*, Aug. 21, 1883) treated 15 (relatively more difficult) of his 64 cases by deeply injecting into the tonsil from 3 to 5 drops of a 5 per cent. solution of the acid, at three spots. Every one of those patients recovered after one, or two, or three injections. Meanwhile, of the remaining (relatively milder) 49 cases, treated by other methods, as many as 7 (11 per cent.) died either from the disease itself or from its sequelæ. Muenchmeyer, however (*Berl. Klin. Wochensch.*, No. 21, 1874), who employed for paintings a solution of 2 grammes of crystalline carbolic acid in 5 grammes of alcohol and 5 of glycerine, was greatly disappointed with his results.

[Dr. Semenoff's review of the literature of the subject is far from being complete. Goetz's method is also approved of by Professor Bouchut, as may be seen from the LONDON MEDICAL RECORD, May 1884, p. 208. The idea of his method, however, is not new, since Taube had at a much earlier period recommended an intratonsillary parenchymatous injection of a 3 per cent. solution of phenol; *vide ibid.*, January 1879, p. 22. The acid plays an essential part also in Renon's plan of treating diphtheria (*ibid.*, July 1884, p. 297), as well as in Perate's (*ibid.*, August, p. 315). According to Dr. R. Neale's *Medical Digest*, Sect. 823 : 5, in England carbolic acid was used locally in diphtheria by Sedgwick, Wright, Callaghan, Fuller, Souley, and Walker and internally by McEwen. Dr. Roth, in his *Arznes-mittel der Heutigen Medicin*, 1877, p. 21, recommends Rothe's formula of this kind. ℞ acidi carbolici, spirit., āā 1·0; aq. dest., 5·0; tinct. iodi., 0·5. M.S. To paint the affected parts, by means of a camel's hair brush, every three hours. Older children should also gargle their throats with a mixture of 30 drops of the solution to a teacupful of water, every fifteen minutes. Dr. Hermann Hager, in his *Handbuch der Pharmaceutischen Praxis*, vol. i., p. 34, recommends also Rothe's formula as well as Sedgwick's 'gargarisma acidi carbolici.' (℞ acidi carbol. dil., gtt. 40; ac. acetici dil., 10·0; mel. depur., 60·0; tinct. myrrhæ, 8·0; aq., 200·0. M.) According to Hager's analysis, Karig's patented 'anti-diphtheritic tincture for painting,' sold at 3 marks for about 3 ounces, consists also of phenol, tincture of iodine, and water. On the other hand, Professors Nothnagel and Rossbach, in their handbook, take issue with advocates of the carbolic treatment, and say that the latter, as far as more or less severe cases are concerned, does not in the least diminish, in comparison with other numberless means, the mortality of this formidable disease. Similarly, Professor Klebs, in his article on 'Diphtheritis' in *Eulenburg's Real Encyclopædie*, vol. iv., p. 183, repudiates 'all such anti-mycotic remedies which, in a concentrated form, give rise to coagulation of proteid substances in animal tissues.' And he then emphasises that he means, 'before all, carbolic acid and chloride of zinc, which might be, if at all, used only in diphtheritis of cutaneous wounds;' while in diphtheria of mucous membranes, he recommends, as the best local remedies, quinine and salicylate and benzoate of potash. According to Professor A. Dokhman's review of anti-diphtheritic therapeutics in the *Mejdünarodnaia Klinika*, November 1, 1883, p. 4, phenol was much used by Landowsky, partly as a caustic painting (5 parts to 30 of glycerine), partly as an antiseptic irrigation (0·4 per cent. aqueous solution), while Bourney advocated a warm spray (carbolic acid with borax in glycerine with water), and Kroenlein proposed to paint with a 1 to 10 per cent. solution of sulpho-carbolate of zinc, instead of phenol. For his own part, Professor Dokhman endorses Steiner's thesis that 'mild cases of diphtheria recover under, and the severe ones do not yield to, any treatment.' Still he has his own plan, consisting in the external use of styptics and in the internal administration of quinine and wine.—*Rep.*]

V. IDELSON, M.D.

ARTICLE II.

POLOTEBNOFF ON THE TREATMENT OF ERYSIPELAS BY NITRATE OF SILVER COMPARED WITH THAT BY WATER DRESSING.*

NITRATE of silver as a means of 'fixing' the erysipelatous process, and of 'transforming a specific inflammation into a non-specific or a simple one,' was first recommended about sixty years ago. Some practitioners employed the 'infernal lapis' as a pencil, with which they used to draw a more or less broad and black line around the affected region, and they were naive enough to expect, and lucky

* POLOTEBNOFF, PROF. ALEXËI G.—Concerning Treatment of Erysipelas (*Polotebnoff's Sbornik Rabot*, vol. i. and ii., 1886-87, p. 150). Edited and published by Prof. Polotebnoff. The publication is a dermatological magazine, the first in Russia.

enough to detect, that the process actually ceased to spread further—probably in consequence of its being simply frightened by the mysterious therapeutic rite. It would be hardly too hasty to affirm that at present an overwhelming majority of practitioners would, without much hesitation, join Professors Nothnagel and Rossbach in their designating the procedure as an 'entirely illusory one (*ganz illusorisch*).'

The plan of painting the whole affected surface with a more or less strong solution of nitrate of silver, cannot be so hastily dismissed. Professor Hebra, of Vienna, saw nothing but a discoloration of the skin when weaker solutions of the salt were used, and only an increase of local inflammation when any stronger ones had been applied. Professor E. Kuester, of Berlin (*Eulenburg's Real Encyclopædie*, vol. v., p. 100), found even strong solutions 'as a rule unreliable, though serviceable now and then' (the same being stated by him also in regard to tincture of iodine, ice, turpentine, &c.). On the contrary, Professor Volkmann, of Halle, obtained most beneficial results from this method, which of all means in his hands 'most often arrested any further spreading of erysipelas, and rapidly or even immediately lowered fever.' The same conclusions were arrived at by several Russian military surgeons (of the Caucasian army) who had tried Volkmann's plan during the last Russian-Turkish war.

In view of those somewhat contradictory statements, Professor Alexëi G. Polotebnoff, the chief of the St. Petersburg dermatological clinic, suggested (in 1879) to Dr. M. J. Stükovenkoff (then his house-physician, and now professor in Kïev) to undertake two parallel series of experiments with the object of studying the influence of the silver treatment on the course of erysipelas comparatively with that of an expectant method, consisting mainly in the use of cold-water dressing.

Stükovenkoff's observations (*Vratchebnyia Vedomosti*, Nos. 458 and 459, 1881) lasted about two years (1879–81), and concerned 66 male patients, aged from 13 to 58, who were affected with sporadic erysipelas (64 with an 'idiopathic' variety, and 2 with a traumatic one) of the face or scalp, or of both (62), or of the lower limbs (4). Forty-two of the whole number were subjected to the silver painting; they required on the whole 142 days of treatment, or, in the average, 3·3 days each, with limits at 1 day (6 cases) and 11 days (1 case). In 83 per cent. of the cases the local process was arrested, and fever disappeared within four days after the beginning of the treatment, the disease yielding the more swiftly the earlier the paintings were resorted to. The remaining 24 cases were treated with compresses. They required 204 days of treatment, or 8·5 days each, with limits at 3 days (1 case) and 18 days (1), in a majority of the cases (17) the affection being subdued between the fourth and ninth day of the treatment. The general corollary drawn by Dr. Stükovenkoff from the facts above was to the effect that 'in a majority of cases the silver paintings shortened the duration of the erysipelatous process more than twice as much as the expectant method could do.' As to various complications, the nitrate proved powerless to prevent either suppuration of palpebral (2 cases) or orbital (1 case) cellular tissue, or croupous pneumonia (1 case with fatal issue). Of the expectant cases one also ended in death, the cause being renal hæmorrhage and general prostration, while another case was complicated with palpebral suppurative phlegmon.

Such was, in general outlines, the outcome of Stükovenkoff's researches. Professor Polotebnoff, however, being conscious of some hiatuses, resolved to systematically continue the same observations by himself. As we gather from a recent excellent, very suggestive paper of his (*Polotetnoff's Sbornik Rabot*, vols. i. and ii., 1886–87, p. 150), the new parallel experiments, concerning 60 successive male cases, embraced the period between February 1881 and July 1883, and were conducted on the same essential lines as the former series. Thirty men were treated with cold-water dressing, and the remaining thirty with a solution made mostly of ½, and sometimes of 1 drachm of the silver salt to 1 ounce of distilled water. The solution was applied every 6 or 10 or 12 hours during the first day, and once or twice daily afterwards, up to the defervescence. The mode of application was invariably this (in both of the series). Immediately after admission the patient's affected parts and adjacent healthy skin (at about two or three fingers' breadth around them) were most carefully, several successive times, washed over with lukewarm water and common grey soap, sponged over with spirit and gently wiped over dry with a soft clean towel. Then the silver solution was slowly and cautiously rubbed into the entire cleansed and dried region, for 5, or 10, or even more minutes, by means of a short lint tuft or a piece of hygroscopic cotton-wool.

Thirty-one patients (15 treated after the abortive method, and 16 after the expectant one) had erysipelas of the face alone, 18 (9 and 9) of the face and scalp, 9 (5 and 4) ditto, with a portion of the body, and 2 (1 and 1) of lower limbs. Five (2 and 3) were admitted on the first day of the disease, 18 (7 and 11) on the second, 20 (11 and 9) on the third, 7 (4 and 3) on the fourth, 3 (2 and 1) on the fifth, 5 (2 and 3) on the sixth, and 2 (of the abortive category) on the seventh and eleventh. The results of these masterly, elaborate, and academically careful observations of the distinguished Russian dermatologist, may be briefly condensed as follows.

1. Nitrate of silver cannot be classified amongst those remedies, to which a power of 'fixing' the erysipelatous process is attributed. True, there are now and then met sporadic instances where the process ceases to spread after the paintings under consideration; but a similar occurrence may be as often (or rather as seldom) noted, also under an entirely symptomatic treatment.

2. The nitrate does not possess any marked antipyretic action, the course of the fever remaining pretty much the same under either of the methods.

3. The nitrate does not prevent the development of the renal lesions. [Albuminuria was present in 35 (58·3 per cent.) patients—namely in 17 (56·3 per cent.) treated with the paintings, and in 18 (60 per cent.) treated with water-dressing.]

4. Under the abortive treatment albuminuria lasts pretty much as long as in the expectative cases. [Its average duration was 3 days in the former category and 3·3 in the latter. In 9 of 35 cases albuminuria was intermittent; in 15 it lasted even after the temperature had fallen down to 37°·4 and 36°·3 C.; while in 5 cases albumen appeared in the urine not earlier than after the temperature had decreased from 40° C. to the standard level. The author adds that his further observations during the last two years—when the urine of all erysipelatous patients was sys-

tematically and frequently examined, also during the apyretic period of the disease—have established beyond any doubt this very interesting fact, that 'in erysipelas albuminuria is absent only in quite exceptional cases.']

5. As to cerebral and pulmonary complications, they occurred by far less frequently under the silver treatment than under the expectant one. [Delirium and loss of consciousness were observed in 2 patients of the former class, and in 5 of the latter; exactly the same respective figures are given for pneumonia.] But it remains as yet an open question, to which cause this difference may be ascribed—to a difference in treatment, or to some quite accidental circumstances.

6. Mortality remains the same under either of the methods. [Of each group, one case ended fatally. In the case treated with the nitrate, death ensued seemingly in consequence of an exacerbation of a late phthisical process under the influence of erysipelas; while the patient treated with compresses succumbed under acute parenchymatous nephritis.]

7. Nevertheless, nitrate of silver undoubtedly shortens, to a certain degree, the duration of the disease. Its beneficial action may be explained by the admission that the painting promotes a more rapid regressive evolution of local inflammation, for when, in a patient with a both-sided facial erysipelas, one side of the face is painted with the silver solution, while the other is covered with a simple water-dressing, redness, pain, tenderness, and swelling disappear on the former side earlier than on the latter.

8. The said shortening, however, is but very trifling. [In the abortive category the average duration of the treatment was 4·6 days and that of the disease 7·5. The respective figures for the expectant group were 5·9 and 8·3 days, the difference in favour of the silver treatment being, therefore, not greater than 1·3 days in regard to the duration of treatment and 0·8 in regard to that of the disease.] In other words, the result does not in any way compensate for the troublesomeness of the painting procedure in a technical respect.

Hence Professor Polotebnoff again fell back on a hydrotherapeutic treatment of erysipelas. He adds that lately he has with advantage substituted for cold compresses the warm ones (at 30° or 35° R.), which are likewise preferred by the patients. As to fats and ointments, the author strictly avoids their use in erysipelas, since they interfere with the maintenance of the skin in a cleanly state, and their thorough removal on renewing the dressing causes discomfort to the patient, while 'compresses relieve the feelings of tension, heat, and pain by far more effectively than any smearing with ointments, and at the same time allow of the skin being kept quite clean, and of the easy observation of any change in the affected region.'

For upwards of six years the author has been also employing in his clinic prolonged (from 1 to 4 hours') tepid baths (35 to 32° C.) in certain cases of erysipelas (as well as in gangrenous and phagedænic ulcers, &c.). The indications for their use are a rise of the temperature above 40° C., weak and accelerated pulse (120 per 1'), and—what he regards as the most essential indication—such complications as a considerable albuminuria, intense and extensive pulmonary catarrh (attacking a large region of both of the lungs) or pneumonia, and cerebral symptoms. According to his experience, the baths of this kind, administered twice or thrice daily, 'represent an excellent symptomatic means, since they lower the temperature and strengthen the cardiac action, which effects have a paramount therapeutic value, especially in the presence of pulmonary or renal inflammations, and of cerebral phenomena.' In 60 of his cases he resorted to the baths in 6—in 1 treated by the paintings and in 5 expectant cases.

It is worth while to mention, in conclusion, that in 40 of 60 cases the morbid process started from the nose, and that in all of these the nasal membrane was found to be inflamed and often presenting very deep erosions covered with scurfs. Similar lesions were detected in 8 other cases where the patients were unable to state from which spot exactly the disease had started. Of the remaining 12 patients, only in 1 (in whom erysipelas had commenced from the neck) could a cutaneous lesion (ulcer) be discovered. All searchings for any initial lesion of the skin in the other 11 cases proved fruitless, the starting-point being a cheek (2 cases), upper eyelid (2), auricle (2), zygomatic region (1), temporal one (1), upper lip (1), and lower limbs (2). The said lesions of the nasal cavity in facial erysipelas were as often ('in an overwhelming majority of the cases') met with also by Professor Stükovenkoff.

V. IDELSON, M.D.

ARTICLE 12.

SCHARSCHMIDT ON THE USE OF HYDRATE OF AMYLENE AS A HYPNOTIC, ESPECIALLY IN THE TREATMENT OF LUNATICS.

DR. C. SCHARSCHMIDT (*Therapeutische Monatsch.*, No. 9, 1887, and *Centralbl. fur die gesammte Therapie*, Dec. 1887) reports on the trials made in Professor Jolly's clinic for psychiatry of the University of Strasbourg, with this new hypnotic, combined with control experiments with other hypnotics, viz., hydrate of chloral, paraldehyde, urethan, &c., the results of which were most satisfactory.

The remedy was employed for 80 patients in 1,050 single trials. Professor Jolly substituted red wine for the cognac recommended by Dr. Mering, and achieved precise dosage by having the sleeping draught prepared separately for each individual patient immediately before administration. A certain volume of hydrate of amylene, *e.g.* 3, 4, or 5 cubic centimètres, corresponding to 60, 80, and 1,000 drops, was measured in a graduated minim glass, which quantity was mixed with 2–3 tablespoonsful of red wine and sweetened with 1–2 teaspoonsful of sugar. In this manner an accurate weight of the quantity of the hydrate of chloral dispensed for each single dose was obtained; thus, its specific weight being 0·8, these three doses of 3, 4, and 5 cubic centimètres represent in weight 2·4, 3·2, and 4·0 grammes (two scruples, two scruples and fourteen grains, and one drachm). It was prescribed in the following form:

℞ Hydrat. amyleni, 2·0–4·0 (one scruple and a half to one drachm).
Vini rubri, 30·0–40·0 (one ounce to one ounce and three drachms).
Sacchar. alb., 5·0–10·0 (one drachm and a half to three drachms).
M.D.S. To be taken at once.

Patients generally prefer for taste and smell the hydrate of amylene to the paraldehyde, but not to chloral and urethan. To those who objected to this

hypnotic it was given in an enema, according to the following prescription :—

℞ Hydrat. amyleni, 3·0–5·0 (two scruples and a half to one drachm and a half).
Mucilag. gumm. accac.,
Aq. dest., āā 25·0 (seven drachms).
M.D.S. Enema.

The doses varied between 1·6 and 5·0 grammes (twenty-six grains and four scruples). Only in one instance 6·0 grammes (one drachm and two scruples) were given, the highest dose ever prescribed; 3·0–4·0 grammes (two scruples and a half to one drachm) are considered average doses, 1·6–2·6 grammes (twenty-six grains to one scruple and twelve grains) are small, 4·8–5·0 grammes (one drachm and fourteen grains to one drachm and a half) large doses.

The sleep, according to the patients' statements, was, after 1·0 gramme (sixteen grains) of the hydrate of the amylene, as good as after 5·0 grammes (one drachm and a half) of paraldehyde, and after 2·4–3·2 grammes (two scruples to two scruples and thirteen grains) of the former equal to that produced by 7·5 grammes (two drachms) of paraldehyde, sometimes even considerably better. The effect of 1·0–1·5 grammes (sixteen grains to twenty-four grains) of chloral was almost less satisfactory than that of 2·4–3·2 grammes (two scruples to two scruples and fourteen grains) of hydrate of amylene. The sleep after smaller doses was not so deep and quiet as after larger ones. The patients, after a dose of 1·6–2·4 grammes (twenty-six grains to two scruples), frequently were roused by the slightest touch, which only rarely occurred after larger doses. The absorption of hydrate of amylene in the digestive tract, be it in the stomach or in the rectum, speedily takes place. In many cases sleep was produced already after 5–10 minutes; in excitable and restless patients, however, the hypnotic action generally did not take place before 20–30 minutes, and in maniacs not before ½–1 hour. Injurious effects on the organism were never observed; digestion was not impaired by the hydrate of amylene, as after the use of chloral, provided that perfectly pure preparations were employed. Only in 2–3 instances nausea and vomiting were brought on, as after the paraldehyde. Appetite and stools remained normal. The secretions were not affected by the hydrate of amylene. In a few patients only profuse perspiration was produced, especially at the commencement of the hypnotic action. Of special importance is the fact that the organs of circulation and respiration are not influenced by this remedy, and their action, after the hypnotic has taken effect, does not differ from that during the normal physiological sleep. The respiration accordingly became as a rule more quiet, somewhat deeper and slower. The hydrate of amylene in therapeutical doses therefore exerts neither an exciting nor a paralysing effect on the centres of respiration. The frequency of the pulse remained unaltered. The pulse-curves, taken before and after administration of this hypnotic, barely show any difference. The question whether the habit of hydrate of amylene may be acquired by its continued use, as is the case with the paraldehyde, still remains undecided. The longest period during which it was effectually continued was for thirty-nine days in two cases.

The hydrate of amylene was employed as a hypnotic, besides chloral, paraldehyde, and urethan, in all the various forms of mental disease in Professor Jolly's clinic for psychiatry. If in some exceptional cases it failed to produce sleep, its effects nevertheless ought not to be undervalued, because the psychical tranquillity and composure, which the patients enjoyed from it, always proved most beneficial. The eighty cases in which hydrate of amylene was employed embrace the following affections: twelve cases of melancholy, partly with stupor, five cases of melancholia agitata, thirteen of paralytic dementia, four of primary dementia, seven of insanity with hallucinations, one of hypochondria, one of stupor, one of chronic alcoholismus, with periodical sleeplessness, ten of mania, two of incoherency ('*Verwirrtheit*'), six of delirium tremens, four of acute delirium, one of hysteria, with sleeplessness, one of hysteria with deliria, one of epilepsy with deliria, and one of epilepsy with attacks of hyper-excitability.

In simple melancholy 1·6–3·2 grammes (twenty-six grains to two scruples and thirteen grains) sufficed even in cases in which 1·5 gramme (twenty-five grains) of chloral had failed. These doses, in certain cases, had a better effect than 7·5 grammes (two drachms) of paraldehyde. Only one (female) patient made continued complaints of determination of blood to the head, a constant concomitant symptom of the affection which could not be relieved either by hydrate of amylene or by paraldehyde, chloral, or urethan. Melancholia agitata required larger doses. In this form 4·0 grammes (one drachm and six grains) of the hydrate of amylene were necessary to procure a whole night of sleep. Once the attempt was made to relieve by diurnal doses the restlessness and excitement in a female patient during the day, but without the desired success. However she slept during the night without another sleeping draught. The hydrate of amylene proved most beneficial in paralytic dementia. The apathetic form required only small doses of this hypnotic: 1·6–2·4 grammes (twenty-six grains to two scruples and thirteen grains), the effect of which corresponded to that of 5·0–7·5 grammes (one and a half drachms to two drachms) of paraldehyde, or 1·5 gramme (twenty-five grains) of chloral. Urethan in doses of 3·0 grammes (two and a half scruples) was without action, and 5·0 grammes (four scruples) had varying effects. Attacks of excitation demanded increase of the doses. In the other forms of dementia the effects of hydrate of amylene were equally satisfactory.

While in chronic alcoholismus with sleeplessness smaller doses of the hypnotic were sufficient, larger ones were necessary in every case of delirium tremens; 4·0–5·0 grammes (one drachm to four scruples) must always be given in order to produce effect.

3·2–4·0 grammes (two scruples and thirteen grains to one drachm) were enough in acute delirium. In one case of acute delirium in a male patient with unusually great excitement, nervous dyspnœa, suffering at the same time from chronic nephritis, all kinds of hypnotics had finally failed, and even a combination of 0·01 (one-sixth of a grain) of morphia with 2·0 (half a drachm) of chloral was without any effect, but 3·2 (two scruples and 13 grains) of hydrate of amylene produced during two following nights some sleep, whilst 4·0 (one drachm) procured good sleep. This once achieved, the effect of the same dose subsequently lasted for the whole night, and the patient always very rapidly fell asleep. In another male patient, suffering from incoherency

('*Verwirrtheit*'), chronic nephritis, heart-disease, and periods of general dropsy, the mental alienation increased, combined with great restlessness, excitement, and want of sleep. Chloral in this case being contra-indicated at the commencement, digitalis and paraldehyde were ordered; but soon complete sleeplessness ensued. Hydrate of amylene, which the patient preferred to paraldehyde, was now prescribed, and in doses of 3·2–4·8 grammes (two scruples and thirteen grains to one drachm and fourteen grains) produced rest, continuing this beneficial effect until the fatal termination of the disease.

In mania, at the commencement, smaller doses of 2·4 grammes (one scruple and seventeen grains) of hydrate of amylene were tried. The action was very tardy, and the patients either slept with many interruptions, or remained altogether restless; larger doses of 4·0–5·0 grammes (one drachm to four scruples), on the contrary, produced longer continued sleep almost without exception. In such cases frequently 1·5 gramme (twenty-four grains) of chloral, and 7·5 grammes (two drachms) of paraldehyde had no effect. 3·0 grammes (two scruples and a half) of urethan failed, and 5·0 grammes (four scruples) of it not always procured sleep. Epilepsy was as little influenced by hydrate of amylene as by paraldehyde. But sleeplessness and nocturnal restlessness were relieved by 3·2–4·0 grammes (two scruples and thirteen grains to one drachm) of hydrate of amylene. The same effect took place in hysteria with sleeplessness and delirium.

FERD. ADALB. JUNKER, M.D.

ARTICLE 13.

PALMER ON HAMEMELIS VIRGINICA IN UTERINE HÆMORRHAGE.

DR. C. D. PALMER, of Cincinnati, Professor of Gynæcology and Obstetrics, Medical College of Ohio, and Obstetrician to the Cincinnati Hospital, read a paper on this remedy before the last meeting of the American Gynæcological Society, reported in the *Nashville Journal of Medicine and Surgery*. His conclusions were as follows:—

Hamemelis Virginica, as all know, is an American remedy, but its use is by no means limited to that country. Very contradictory reports concerning its virtues have been made, but, so far as can be determined, the verdict is in its favour where it has been thoroughly tried, in a good preparation. Some of the best and recent American works on therapeutics—Wood and Bartholow—do not refer to it, and it is merely mentioned by English authors—Brenton, Waring, and Ringer. No reference is made to it by late gynæcological authorities—Thomas, Emmet, Hart and Barbour, Fritsch and Gusseron—nor in the more recent contributions on menorrhagia in Pepper's system of practice, or the American system of gynæcology.

The power of this drug as a hæmostatic entitles it to a higher position among therapeutic remedies than it has occupied—a position, said the author, superior to the viburnicum, hydrastis, or gossypium, and in some cases to ergot. An experience with this medicine spread over a period of six to eight years, justifies him in expressing a high opinion of its virtues. It is true that it has been utilised for hæmorrhages of all parts of the body—nose, air-passages, stomach, bowels, rectum, and kidney, also for menorrhagia, extravasations under the skin, and varicose veins, but the author's experience is almost entirely confined to this condition of the uterus and the female bladder. Hamemelis does not seem to be equally potent for all kinds and conditions of uterine hæmorrhage. For the sudden outburst of a flow, for active, profuse hæmorrhage, it is inferior to ergot. But for a slow, long-continued flux, where the blood is dark and venous, and the hæmorrhage is passive in character—a symptomatology indicative of passive engorgement and relaxation—it is a remedy *par excellence*. These are conditions ever present in flabby, enlarged, sub-involuted uteri, after delivery and abortion, also in some forms of chronic endometritis, before or following the removal of fungosities, and in chronic retroversion, some fibroids, &c.

A menorrhagia may still continue in a mitigated form, and a metrorrhagia return, even after the local disease of the uterus exciting them has been improved as far as possible by local, medical, and surgical treatment. The author stated that he could give the history of a number of cases of uterine hæmorrhage resulting from fungosities and endometritis hyperplastica, which continued as a menorrhagia, modified, but not controlled after repeated curettements (in one case seven times), which was finally checked by the internal administration of hamemelis after failure with ergot.

The writer has also been much pleased with the effect of hamemelis in favourably influencing urinary hæmorrhage in several cases of papilloma of the bladder.

There are some worthless preparations of hamemelis; the so-called Pond's extract, and a colourless, distilled product, are unworthy of confidence. The best preparation is the officinal fluid extract in doses of a few drops up to two drachms. Larger doses are needed when decided effects are urgent, although very small doses often repeated are recommended.

Hamemelis is somewhat tonic and sedative, slightly astringent, and decidedly hæmostatic. The virtues of the drug cannot reside alone in the tannic and gallic acids which it contains, for equal quantities of these astringents fail to produce similar results. Hamemelin has been extracted from it, but whether this represents the chief active ingredient is uncertain.

SURGERY.

RECENT PAPERS.

14. WATSON.—On the Question of Suturing the Bladder or not after Suprapubic Cystotomy. (*Boston Medical and Surgical Journal*, Nov. 3, 1887.)

15. BERGER.—On the Operative Treatment of Ununited Fracture of the Femur. (*Revue de Chirurgie*, No. 11, 1887.)

16. KÜMMELL.—On the Operative Treatment of Internal Strangulation. (*Centralbl. für Chirurgie*, No. 48, 1887.)

17. EHRMANN.—On Secondary Nerve Suture. (*Revue de Chirurgie*, No. 7, 1887.)

18. KOCHER.—On the Diagnosis of Dermoid Cyst. (*Centralbl. für Chirurgie*, No. 44, 1887.)

19. CURTIS.—On Contusion of the Abdomen with Rupture of the Intestine. (*American Journal of Med. Sciences.*)

20. SCHUCHARDT.—On Tubercular Rectal Fistula. (*Sammlung klin. Vorträge*, No. 296.)

21. GREFFRATH.—On Fistula in Ano. (*Deutsche Zeitschrift für Chirurgie*, Band xxvi., Hefte 1 and 2.)

22. SHAKESPEARE.—On the Infectious Nature of Traumatic Tetanus. (*Philadelphia Med. Times*, Oct. 15, 1887.)

23. LENHARTZ.—The Treatment of Acute Internal Entero-stenosis. (*Deutsche Med. Wochensch.*, No. 42, 1887.)

24. SCHAEFFER.—A Case of Remarkable Analgesia in the Urinary Passages. (*Deutsche Med. Wochensch.*, No. 40, 1887.)

25. NOVARO.—Transplantation of the Ureters into the Rectum. (*Congresso Medico di Pavia, Gazz. degli Ospitali*, Dec. 14, 1887.)

26. ANTAL.—On Methods of Treatment for Strictures of the Urethra, and on his Aero-urethroscope. (*Viertelj. für Derm. und Syph.*, No. 4, 1887, and *Centralbl. für die gesammte Therapie*, November 1887.)

27. PALMER.—On Boric Acid for Sterilising Urine. (*American Practitioner and News.*)

ART. 14. *Watson on the Question of Suturing the Bladder or not after Suprapubic Cystotomy.*—The *Boston Medical and Surgical Journal* of Nov. 3, 1887, contains a paper in which Dr. F. S. Watson, of Boston, reported to an American Society for Mutual Improvement a case of papilloma of the male bladder successfully removed by the suprapubic operation. The wound in the bladder was closed by sutures, and perineal section performed for the sake of drainage, and in order to wash out the bladder with a constant current of hot boric solution. The wound in the perineum was just large enough to admit a No. 29 (French) catheter. In his comments on this case Dr. Watson stated that the decision as to whether the suture should be applied or not after cystotomy above the symphysis pubis depends on what is left behind in the bladder. His own experience would tend to prevent him from stitching up the vesical wound where a bleeding surface was left. The end of an instrument introduced into the bladder through the perineal wound and allowed to remain in the cavity, would be likely to cause vesical tenesmus by irritating the raw surface and by setting up renewed hæmorrhage. The tenesmus in his case was so great that Dr. Watson is confident that no suture could have resisted the strain. Another consideration is that of the presence or absence of cystitis. Here, it is stated, the surgeon is placed between two fires. The foul urine escaping through the wound increases the risk of sepsis, whilst, on the other hand, in an inflamed bladder a wound is less likely to close when sutured, and, moreover, the thorough drainage which the open wound gives is the best treatment for the inflammatory condition. The following are the conclusions that have been formulated by Dr. Watson on this question: '(1) When hæmorrhage is going on or is likely to recur to any great extent after the operation, it is better to leave the wound in the bladder open. (2) When the bladder is not inflamed, and there is no hæmorrhage at the conclusion of the operation, sutures should be applied. (3) When severe cystitis exists, the decision is doubtful. Further experience is required to settle this question.'

15. *Berger on the Operative Treatment of Ununited Fracture of the Femur.*—M. Paul Berger has recently reported in the *Revue de Chirurgie*, No. 11, 1887, two successful instances of resection of the fragments, and osseous suture, in the treatment of pseudarthrosis of the femur. The statistics of this operation that have been published by Feraud and others show that it has been a serious one and very uncertain in its results, but Berger is of opinion that recent improvements in operative methods, together with a rigorous application of the principles of the antiseptic method, will in future assure a much more satisfactory proportion of cures and a very marked reduction in the number of fatal results. It is very difficult, however, in this operation to avoid suppuration, in consequence of the depth of the incision, the profuse hæmorrhage, the risk of separating the periosteum from the ends of the fragments, and the presence of bone dust in the wound. With a view of indicating the causes of failure of the operation, the following results are given of the examination of a specimen taken from a man who died six months after resection of a pseudarthrosis of the femur and metallic suture of the ends of the fragments: '(1) In this case the tendency to separation of the fragments that had been the primary cause of the non-consolidation of the fracture was manifested even after the operation. (2) That osseous suture is sometimes incapable of overcoming this tendency; the wire may be broken, its loop may yield, or it may cut through the bone. (3) That the wire may act as a conductor to pus and direct it towards the deep-seated parts, so that if the external wound suppurates, the centre of the resection must also invariably suppurate.' There has usually been great difficulty in removing intact the wire uniting the fragments. In order to overcome these difficulties, M. Berger makes a cuneiform section of the end of each fragment, the end of the upper fragment forming a projecting wedge with its apex directed downwards, whilst the end of the lower fragment presents a V-shaped recess of suitable size for the reception of the former. The free portions of each osseous suture are cut away so as to do away with any communication between the external wound and the bone; in one of the reported cases silver wire was used, and in the second platinum wire. M. Berger describes an apparatus of plaster of Paris which he has prepared beforehand, so that the limb may be rendered immovable immediately after the operation and before the effects of the anæsthetic have passed off. It is stated that through these means complete osseous consolidation was attained in the two recorded cases of compound fracture of the femur followed by pseudarthrosis. It is pointed out, however, that resection and osseous suture in cases of ununited fracture in the thigh will always be found a laborious, prolonged, fatiguing, and difficult operation, and that in order to keep the limb in a good position and to avoid serious complications, especially suppuration, it is necessary for the surgeon to pay great attention to the after-treatment.

16. *Kümmell on the Operative Treatment of Internal Strangulation.*—In the *Centralbl. für Chirurgie*, No. 48, 1887, Dr. H. Kümmell, of Hamburg, contends that laparotomy is preferable to the establishing of a false anus in the treatment of internal strangulation. The unfavourable results that have hitherto so often followed the performance of laparotomy in cases of internal obstruction and peritonitis are attributed to difficulties in diagnosis, and to the long delay that so frequently occurs before the performance of the operation. In most instances the surgeon is not called in until after a whole host of internal remedies, and of intestinal and gastric injections have been tried, and after the patient's strength has been reduced to an extreme degree, and probably gangrene or perforation has occurred. The frequent delay in resorting to laparotomy in cases of obstruction is doubtless due to the diagnostic difficulties, especially to the frequent absence of some important and characteristic symptom, such as vomit-

ing or meteorism. The most serious difficulties in differential diagnosis consist, Kümmell thinks, in distinguishing obstruction caused by twisting or flexure of the intestine, from the morbid condition known as perityphlitis. A distinction between the former kind of obstruction and that due to fæcal accumulation or to tumour is less important, as laparotomy is indicated in both these classes of cases, whilst in perityphlitis, so long as diffuse peritonitis does not exist, it is strictly contra-indicated. General peritonitis, which often simulates ileus, is almost always a secondary affection, and the result either of ileus or of intestinal perforation due to some other cause. It is stated that peritonitis of idiopathic, and not of traumatic or septic origin, is a very rare occurrence. In the operative treatment of most cases of intestinal obstruction, laparotomy, Kümmell points out, permits the most clear and sure investigation of the abdominal cavity, and the most effectual application of methods of relief. The obstruction by means of this procedure may be promptly exposed, and, if the surgeon operate in good time, may be removed. Finally, this operation alone affords the possibility, in cases of perforation and of consequent peritonitis, of closing the opening in the gut, of disinfecting the abdominal cavity, and of giving the patient a chance of recovery. The simple establishment of a false anus, on the other hand, does not permit clear and direct observation of the condition of the abdomen. It fails in some instances to relieve the obstruction, and very often is not a final operation, but renders necessary at a later period another operation, not always free from danger. The chief objections that have been made to laparotomy in the treatment of intestinal obstruction are the severity of the operation, especially when performed on a subject in a wretched condition, its long duration, the uncertainty of finding the obstruction, and, finally, the difficulty in returning the intestines. With regard to the first of these objections, Kümmell states that when the operation is performed early, and as soon as the diagnosis of ileus has been made, and no time is lost in useless attempts to determine the seat and mode of obstruction, the patient will usually have sufficient strength to withstand the immediate effects of laparotomy. Kümmell exposes the intestines very freely by a long incision in the abdominal wall, extending from the xiphoid appendix to the symphysis pubis, and then passes his fingers rapidly along the distended coils until he reaches the collapsed portion of gut. In each of the seven cases in which he performed laparotomy the obstruction was found within a few minutes, and in some cases the whole operation was not prolonged over twenty minutes. With a small incision in the anterior abdominal wall much time will necessarily be taken up in feeling for the obstruction, in manipulating the intestine, and in returning the distended loops ; and in exploration by the fingers without the aid of eyesight there is always a risk of missing the cause of the obstruction. In considering the objection to laparotomy so much insisted on by Madelung, which relates to the difficulty in returning the protruded mass of distended intestines into the abdominal cavity, Kümmell protests against the practice of reducing the distension by puncture or incision. Such practice, it is held, complicates and prolongs the operation, increases the risk of infection, and, moreover, is quite unnecessary. By the following method he has always succeeded without much trouble in returning into their normal position masses of protruded and much distended intestine. The protruded mass, having been returned as far as possible into the abdominal cavity, is covered by a disinfected napkin, the edges of which are pushed well under the walls of the abdomen—above, under the margins of the ribs, below, into the pelvis, and on each side for some distance beyond the margins of the external wound. This napkin, having been well stretched out, the abdominal incision is closed by sutures from above downwards, all the sutures being applied and left loose before the first one is tightened and secured. The intestines are thus prevented from slipping out of the wound, and are guarded against the points of the needles. When the upper part of the wound has been closed along an extent of three or four inches, the portion of the napkin lying under this closed part of the wound is withdrawn; then, as the rest of the wound is gradually closed by sutures, in the direction from the xiphoid appendix to the pubis, more and more of the napkin is gently removed. In conclusion, Kümmell alludes to the introduction of the stomach-tube, recommended by Rehn as a very certain and prompt aid in the reduction of protruded intestines in cases of laparotomy. In two cases of intestinal obstruction, in which the abdominal cavity was opened, and some difficulty was found in reducing the intestine, the washing out of the stomach was, it is stated, immediately followed by complete collapse of the much-distended loops.

17. *Ehrmann on Secondary Nerve Suture.*—In the *Revue de Chirurgie*, No. 7, 1887, Dr. J. Ehrmann, of Mulhouse, has reported a case of suture of the musculo-spiral nerve seven months after its accidental division by a knife. In consequence of persistence of muscular paralysis after the operation, the nerve was again exposed seven months later. Its continuity, it was found, had been re-established, but it was imbedded in and compressed by a mass of inodular tissue, excision of which was followed by a speedy return of the mobility of the limb. In his comments on this case the author states that it serves to demonstrate the utility of nerve suture. The operation, it is held, should always be tried in cases both of recent wound and of long-standing division of nerve-trunk. If immediate union of the divided ends should fail, approximation of these ends might favour regeneration by granulation, the final result being just as good for the patient. In performing the operation for nerve suture, the surgeon ought to take into consideration the many probable causes of failure of functional restoration. Dr. Ehrmann's case shows that compression of the sutured nerve by inodular exudation developed in the wound may lead to an impression that the operation has failed, whilst regeneration has really been effected. Under such conditions excision of the cicatricial tissue would bring about, or considerably accelerate, return of innervation. The knowledge of this fact ought to induce the surgeon to direct particular attention to the mode of dressing, and to such local agents as are capable of avoiding suppuration in the wound after suture of a nerve. In the cases in which this complication has been met with it was not diagnosed before exploration. Dr. Ehrmann insists on the importance of the surgeon bearing this possible condition in mind, and states that if after nerve suture cure has not taken place at the end of four or five months, he would not hesitate, though there might be but slight presumption of the presence of the above described complication, to incise the cicatrix of the operation-wound in order to

assure himself of the state of the nerve, to test its electrical conductibility, and, in case this should fail, of removing all cause of compression. It is pointed out, however, that in cases of secondary suture of the musculo-spiral, median, and ulnar nerves, amelioration never goes on very rapidly after the appearance of the first signs of returning motor power. Complete restoration is often delayed for six months, or even for one year or more. This delay is due to the trophic disturbances undergone by the muscles in consequence of division of the nerve by which they are supplied. After the sutured nerve has regained its conducting capacity, the muscles, as has been proved by Vulpian, return to their normal condition, but this process of reparation always requires time, the duration of which it is difficult to foretell.

18. *Kocher on the Diagnosis of Dermoid Cyst.*—Dr. Streit, of Bern, in a contribution to the *Centralbl. für Chirurgie*, No. 44, 1887, states that Professor Kocher has recently pointed out a pathognomonic sign by which dermoid cyst may be diagnosed from other subcutaneous growths of like form. In a case of dermoid cyst in the usual situation near the margin of the orbit, it was found that the shape of the tumour became altered during manipulation, and that by firm digital pressure it was possible to convert the normal oval into a triangular swelling, or into a rounded one with protuberances and elongated processes. Professor Kocher, in explaining this fact, states that the contents of a dermoid cyst present on external examination a very close resemblance to putty, and that constantly a tumour of this kind may, when the cyst-wall is not very tense, be altered in shape like a mass of this material. The tumour after excision was found to consist of a lax thin cyst-wall, containing masses of epithelium and fat, with a little cholesterine, and some hairs. The conditions in this case were exceptionally favourable for the production of alterations in the shape of the tumour, but it is held that, in most cases of dermoid growth, long-maintained digital pressure will produce a depression on the surface, distinctly perceptible, and remaining for some time. A like depression cannot be thus formed on the surface of any other variety of tumour. On this occasion Professor Kocher directed attention to another sign which in some cases of dermoid cyst will enable the surgeon to establish a sure diagnosis. This is a peculiar crepitation which may be produced by firm compression of such a cyst, which contains, in addition to epithelial and fatty masses, a large proportion of hair and some fluid. The form of crepitation is analogous to that produced by moistening with water, and then squeezing, a handful of greasy horsehair.

19. *Curtis on Contusion of the Abdomen with Rupture of the Intestine.*—The October number of the *American Journal of the Medical Sciences* (*The International Journal of the Medical Sciences*) opens with an abstract of a prize essay by Dr. B. Farquhar Curtis, of New York, on Contusion of the Abdomen with Rupture of the Intestine. In his study of this subject the author has performed a series of experiments on dogs, and sought by experiments on the cadaver to throw some light upon the still doubtful mechanics of rupture of the gut. An analysis is given of 116 cases of rupture of the intestine, and of 33 cases of contusion of the abdomen ending in recovery, with special attention to the earliest symptoms of the injury, in the hope of rendering an early diagnosis possible. Finally an attempt has been made, in the light of the experimental and clinical experience thus far gained, to indicate the most promising methods of treatment. The results of experiments made on 44 dogs indicated that the most common causes of death after contusion of the abdomen are hæmorrhage and shock, and that the latter condition is greatly increased by a prolonged operation, such as resection of the intestine. Prompt action may save life in some cases of internal hæmorrhage, otherwise fatal, and also in cases of contusion, threatened gangrene, and even rupture of the intestine. The danger in cases of contusion is greatly increased by delay in treatment. From his experiments on the cadaver, the author concludes that in contusion of the abdomen the intestine is ruptured by being crushed between the contusing body and the bony parts—the vertebræ and pelvis. The injury is therefore not a true *rupture*, but a contused and lacerated wound of the gut. There are, it is stated, many chances in favour of the escape of intestine from injury in contusion of the abdomen. There may be no gut lying directly at the point where the blow is inflicted; the gut may be partially inflated with gas; or it may slip away from the pressure exercised by the blow. An analysis of the clinical histories of 149 collected cases of abdominal injury has led the author to form the following conclusions with regard to diagnosis: 'In a few cases of contusion of the abdomen,' he states, 'it will be possible to decide what organs have been injured, but in by far the greater number of cases a diagnosis cannot be made. The absence of symptoms indicating rupture of the liver, spleen, or urinary bladder, and the presence of severe shock, great abdominal pain and tenderness, severe vomiting, and the early development of peritonitis would favour the diagnosis of rupture of the intestine. It will seldom be possible to decide, during the first six hours or more after the accident, whether the intestine has been ruptured or not. However slight the symptoms may be, it cannot be justifiable to declare that no visceral injury has resulted until several days have passed without the appearance of symptoms, for symptoms may remain latent after injury to almost any of the abdominal organs, and such a course is not infrequent with rupture of the intestine and bladder. Even when the contusing force has been apparently trifling, the greatest care should be exercised in giving a prognosis.' The author, who is opposed to very early operative interference in cases of contusion of the abdomen, the treatment of which, it is held, should be wholly symptomatic, sums up as follows the practical results of his studies: '(1). The treatment of contusion of the abdomen should be purely expectant in the early stage, until symptoms of internal injury have appeared, or until the full extent of time in which they may be expected has passed. Explorative laparotomy at this time is inadmissible. (2). When symptoms of uncontrollable internal hæmorrhage, or serious visceral injury appear, laparotomy is indicated; but when the diagnosis is uncertain, the operation should always be begun as an exploration. (3). Great collapse is an absolute contra-indication to any operative interference. (4). When rupture of the intestine is found, the best method of treatment is to secure the injured gut in the abdominal wound, and form an artificial anus. This can be easily removed by a later operation, when the patient has recovered strength.'

20. *Schuchardt on Tubercular Rectal Fistula.*—In a recent addition (No. 296) to Von Volkmann's *Sammlung klinische Vorträge*, Dr. Karl Schuchardt,

of Halle, states that it is now well known that certain rectal fistulæ, especially those affecting phthisical subjects, are essentially dependent on tuberculous processes. The tuberculous nature of such fistulæ may, as in other local affections due to tuberculosis, be proved by the discovery of the presence of the tubercle-bacillus, by the structural indications of tuberculosis, such as a deposit of miliary tubercles and diffuse tubercular infiltration, and, thirdly, by the results of injection of minute portions from the open surface into the anterior chamber of the eye of the rabbit with a view to bacillus culture. This, according to Schuchardt, is a valuable method in diagnosis, and for determining the presence of bacilli in local surgical affections of tuberculous nature. In such cases negative results of microscopical examination do not prove anything, as bacilli may still be present, though in small quantities and widely scattered, whilst, on the other hand, inoculation will always give a certain and positive result. The differential diagnosis of the tubercular from the non-specific rectal fistula may almost always be readily established, and often by simple ocular inspection. When the external opening of the fistula resembles a tubercular ulcer of the skin, and its margins are jagged, undermined, of a bluish or violet colour, and probably studded with miliary tubercles, when spongy granulations protrude from the external opening, and when the discharge from the fistulous track is mixed with caseous masses, then the tuberculous nature of the affection may be positively asserted. On the introduction of a probe there will usually be found much burrowing of the deeper part of the fistula, so that the point of the instrument will pass here and there into a blind ending. If the fistula be slit up, masses of tuberculous granulations will be exposed, resting usually on a thick external layer of sclerosed connective tissue. Schuchardt holds that in a great majority of cases rectal fistula, whether simple or tubercular, originates in the mucous membrane of the rectum, and is the result of some small solution of continuity caused by unusual hardness of the fæcal contents of the gut, or by the presence of undigested vegetable matter, or of a small piece of bone. That temporary arrest and accumulation of masses of hardened fæces are the chief causes of rectal fistula is indicated by the fact that in another portion of the intestinal canal in which similar conditions often occur—namely, the cæcum and vermiform process—inflammations both acute and chronic, resulting in the formation of fistulæ, are not uncommon. Occasionally a cæcal fistula presents the characters of a tubercular ulcer, and there is a form of inflammation in the region of the cæcum known as perityphlitis tuberculosa. Both the rectum and the cæcum, the former on all sides, the latter posteriorly, are in contact with much lax connective tissue, and this is very probably the reason why tuberculosis affecting these organs leads to the formation of fistulæ and leaves the mucous membrane almost intact, whilst in other parts of the intestinal track it results in the production of extensive typical ulcers on the inner surface of the gut. In tubercular rectal fistula there is but slight and very limited ulceration of the mucous membrane, the tuberculosis being manifested chiefly in extension of inflammation in the perirectal connective tissue. In accordance with the law that every subject presenting any signs whatever of local tuberculosis is to be considered with regard to his general constitution as suspect, the appearance of a tubercular rectal fistula is to be regarded as a certain indication that the lungs or some other internal organ will soon become or are already affected. In discussing the treatment of tubercular rectal fistula, Schuchardt insists on the necessity of early operative interference for the removal of all the diseased structures. With this object in view the surgeon, he states, should, after careful removal of the fæcal contents by repeated injections, forcibly dilate the anus, cleanse the exposed mucous membrane of the rectum with a solution of corrosive sublimate, and search for the internal opening of the fistula. This opening in most cases lies on the internal sphincter or just above this muscle, and is seldom more than two inches above the anus. The nearer the external opening of the fistula, the higher, as a rule, lies the internal opening above this outlet. After the whole extent of the fistula has been traversed by a director, all the soft parts between the external and the internal opening are to be divided. The bleeding having been arrested, the margins of the wound are held apart by hooks, and all diseased and tuberculous structures carefully removed by the sharp spoon, by forceps and scissors, or by the knife. All recesses of the fistula, and spaces formed under the skin and mucous membrane by burrowing, should be freely laid open by the knife, and the inner lining be carefully removed. After the disease has been thus extirpated the raw surfaces are to be washed with a solution of salicylic or boracic acid, and the whole of the wound to be firmly plugged by pieces of iodoform gauze. Finally, Schuchardt covers the seat of operation by carbolic acid gauze. In order to prevent fouling of the wound by fæcal matter, he administers internally fifteen drops of laudanum immediately after the operation, and afterwards for a few days five drops every two hours. Great importance is attached to careful plugging of the wound, as it is only by free exposure of the granulating surfaces during the after-treatment that tendency to relapse can be detected and checked in the bud. The introduction of iodoform gauze is persevered in as long as it is possible to keep the wound open.

21. *Greffrath on Fistula in Ano.*—A paper in the *Deutsche Zeitschrift für Chirurgie*, Band xxvi., Hefte 1 and 2, by Dr. Carl C. F. Greffrath, of Heidelburg, on the treatment of fistula in ano by the galvanic cautery, contains also some statements of interest relating to the occasional association of this local affection with tuberculosis and diabetes. The author's conclusions on these points, and on the value of the cautery in the treatment of rectal fistula, are based on an analysis of sixty-one cases treated in the Heidelburg Surgical Clinic during a period of eight years and a half. Of the sixty-one patients, ten presented distinct signs of pulmonary tuberculosis, and seven had each a history of hereditary tendency to this disease. Reports as to the result of operative treatment of the rectal fistula could be obtained in six only out of the ten cases of phthisis. In one case the fistula was completely, and in two cases incompletely, healed. The other three patients had succumbed to phthisis, with the fistula remaining open. Of the seven patients with family history of tuberculosis, three had died, two of these from phthisis, whilst in the survivors, in two the fistula had healed, and in one remained open up to the time of the last report. In thirty-four patients whose internal organs were believed to be quite healthy, the division of the fistula by Paquelin's cautery was followed by complete healing in all but four cases. From these data it follows, according to

the author, that some rectal fistulæ must be regarded as tuberculous ulcers. Such fistulæ are, as has been pointed out by Virchow, to be distinguished from the non-specific fistulæ by their tendency to the growth of large masses of fungous granulations, to the formation of sinuous abscesses, and to extensive undermining of mucous membrane and of external skin. In cases of this kind, and especially where there is a family history of tuberculosis, the fistula should be treated by operation as soon as possible, in order to prevent transmission of infective material from the scrofulo-tuberculous deposits to the circulation, and consequent general tuberculosis.

Two instances are recorded by Dr. Greffrath of the complication of rectal fistula with diabetes. It is well known that furunculo-carbunculous inflammations of cellular tissue are often developed in diabetic subjects. Such inflammatory condition, when it affects the anal region, may readily lead to fistula. In considering the question whether it be justifiable to treat by operation a fistula in one suffering from diabetes, the author states that every surgeon ought to refrain from the use of the knife when there is much sugar in the urine. It is true, however, that many operations performed on diabetic patients, who were not known to be thus affected, have been unattended by accidents, and have resulted in cure. In order to settle the above question it is necessary to obtain a larger number of clinical records. In dealing with a case of fistula in ano in a diabetic subject, the surgeon, before resorting to any cutting operation, should take care that his patient has been put on an anti-diabetic regimen, and that the amount of sugar in the urine is not very great. Dr. Greffrath regards as the best method of operative treatment in cases of fistula, division by means of a knife-shaped thermo-cautery. In the practice of Professor Czerny better results, it is stated, have been obtained from this method than from the use of the knife. The eschar formed by the thermo-cautery protects the divided surfaces from the action of any infective material during the first few days after the operation. Notwithstanding every precaution, the bowels may be relieved in the course of the first twenty-four or forty-eight hours. The operation by the thermo-cautery is performed in a few seconds, and with but slight bleeding. The formation of granulations is likely to be more active after the application of red heat than after use of the cold knife. The presence of an eschar for some days after the operation renders impossible any premature adhesion of the surfaces of the wound.

22. *Shakespeare on the Infectious Nature of Traumatic Tetanus.*—The *Philadelphia Med. Times*, Oct. 15, 1887, contains a preliminary report on experimental researches concerning the infectious nature of traumatic tetanus, which was read at the last International Congress by Dr. Edward O. Shakespeare, of Philadelphia. This report gives the results of inoculation experiments that have been made on rabbits, two methods having been employed: intracranial inoculations after the method of Pasteur in the case of rabies, and subcutaneous or inter-muscular injections. The material used for inoculation was in general obtained from the medulla or the spinal cord, and cultures in neutral or slightly alkaline flesh-glycerine-agar, recommended by Roux for the culture of tubercle-bacillus. The tetanus material was taken, under antiseptic precautions, from the brains and cords of a horse and mule that had died from traumatic tetanus. The author concludes from the experiments that he has hitherto made, 'that traumatic tetanus of the lower animals and of man, at least sometimes, possibly always, is a specific infectious disease due to the action of a specific infectious virus which exists in the tissues at the seat of infection, in the blood, and in the central cerebro-spinal nervous system.' There seems, it is stated, to be ample warrant for the admission that tetanus in man is not infrequently acquired directly and indirectly from some of the domestic animals by which he is surrounded, and notably from the horse.

W. JOHNSON SMITH.

23. *Lenhartz on Acute Internal Entero-stenosis.* After describing two cases of internal incarceration, which were successfully treated by him by means of enemata, Dr. Lenhartz treats generally of the subject (*Deutsche Med. Wochensch.*, No. 42, 1887). In answer to the question whether in his two cases recovery was due to his method of treatment, he says there can be no doubt about it. For one thing, similar cases are reported elsewhere, and further, it is easily conceivable how, by the irrigated fluid, displaced or twisted intestinal loops may be brought into a better position, and even fæcal tumours or gall-stones may be moved, washed away, loosened, or reduced in size by the repeated injections. At any rate, the latter never did any harm, while a dose of castor-oil had a bad effect on the general health, increasing particularly the vomiting. It will be generally found that the treatment with enemata is not carried on long enough, being usually abandoned if the first two or three attempts are unsuccessful. It should be persevered in, and recourse may be had to emptying the stomach of its fæculent contents, and to repeated puncturing of the inflated intestines. The only valid objection to washing the stomach is from the surgical point of view, namely, that, owing to apparent improvement, a really necessary operation may be postponed until it is too late. Lenhartz has not found this danger to exist in his experience. To show the value of introducing the stomach-pump, he gives two cases of typhoid fever. One was that of a boy eleven years of age, in which there was a sudden appearance of meteorism affecting the stomach and the transverse colon. Pronounced peristaltic action of the inflated intestines put perforative peritonitis out of the question. The boy could not get rid of wind upwards or downwards, and the bladder was greatly distended. The tube was introduced, through which much wind escaped, and, further, a passage was made for the wind through the bowels, and the general condition was much improved. In the second case the most serious meteorism set in on the thirteenth day, and in this case, too, the introduction of the tube removed the obstruction. Again, surgical opinion is decidedly opposed to puncturing on account of the danger of septic peritonitis and the uncertainty of good results. However, here again Lenhartz's experience leads him to doubt these fears. He would avoid laparotomy as much as possible, and try other means first. As to the danger of fatal peritonitis, it is ever present when laparotomy is done. He points to the fact that the most eminent surgeons will undertake the operation only when the patient has a fair amount of strength, when the abdomen is soft and not distended, and when the point of obstruction can be determined with some certainty. At the same time he admits that, in many cases of entero-stenosis, laparotomy is undoubtedly indicated; he would only put in a word of caution not to overlook the methods he has above treated of.

24. *Schaeffer on a Case of Remarkable Analgesia in the Urinary Passages.*—Dr. F. Schaeffer reports this case from Breslau, in the *Deutsche Medicinische Wochenschrift*, No. 40, 1887. A man, 54 years old, complained of a slight burning sensation during micturition. The patient was a robust man, who had shortly before been on a walking tour. He had never had pains in the renal region, nor had there ever been gravel in the urine. The sensibility of the skin and mucous membranes to the touch and to pain was perfectly normal. The urine, which was not of larger quantity than formerly, was normal, slightly acid, without any sediment, nor did microscopic examination discover anything abnormal. The prostate, as far as could be observed by rectal examination, was also normal. Merely as a precautionary measure, Schaeffer introduced the sound, and to his great astonishment found on the right of the base of the bladder a calculus, apparently of the size of a small cherry, which he could easily push about with the sound. The patient did not experience the slightest pain while this was being done. Without assistance and without narcosis he performed lithotrity with a very small instrument; and as the bladder was 'quiet' the calculus was soon grasped. The patient did not stir, for though he felt the instrument plainly, yet he had absolutely no pain. In order not to disturb the bladder, Schaeffer did not wash it, but at once applied the evacuating apparatus, still without narcosis. The *débris* poured into the glass ball. There was not a trace of mucus or blood. The fluid in the ball assumed the colour of urine, for the operation had been done on the full bladder. The patient had in the meantime been laughing and smoking cigarettes. The *débris* of the calculus was completely removed, and the patient was able to return home the next day. It may be safely assumed, says Schaeffer, that the calculus had formed in the kidney, and not in the bladder; for it is inconceivable that a concretion primarily arising in the bladder should cause no pathological alteration of the urine. It is rather to be assumed that the calculus entered without any symptoms from the kidney through the urinary passages, a by no means infrequent occurrence. But, as in this case, the calculus cannot have been small, there must have been a peculiar analgesia of these organs to have rendered the passage of the calculus not only painless, but even unobserved. Schaeffer adds some remarks on so-called litholapaxy. He says the sudden cessation of the *débris* during aspiration is not always caused by the fact that there are no more little calculi in the bladder, for sometimes the evacuating catheter becomes blocked at the opening by a small particle of calculus, which acts as a valve. Hence the necessity of crushing the *débris* as finely as possible. But it will always be more or less accidental if all the *débris* of the calculus are got away by aspiration. Even Nitze's illuminating apparatus is no safeguard, for the illumination is of a restricted nature. The safest means is the calculus probe in a practised hand, for it is astonishing what minute particles can be thus detected. And in the last instance the patient's own sensations are the best criterion whether the bladder is quite free. JOHN ELLIOTT.

25. *Novaro on Transplantation of the Ureters into the Rectum.*—Novaro describes the autopsy of a dog in which he had performed the above operation in January last. The dog had been in perfect health ever since the operation, and the urine was passed voluntarily, sometimes quite long intervals intervening between one micturition and another. The bladder was reduced to a little oblong body; one ureter was very slightly dilated; there was no trace of hydronephrosis; the openings of the ureters into the rectum were quite pervious; the rectal mucous membrane was slightly irritated. This case proves the possibility and compatibility of transplantation of the ureters to the rectum, not only with life, but with the normal fulfilment of the functions of the kidneys. In reply to a question of Prof. Bassini, he said the operation would be imitated in man when it was necessary to remove completely the bladder for malignant tumour, or in cases of ureter-abdominal fistula. G. D'ARCY ADAMS, M.D.

26. *Antal on Methods of Treatment for Strictures of the Urethra, and on his Aero-urethroscope.*—Dr. Géza Antal, Professor of the Diseases of the Genital Organs, at the University of Buda-Pesth, at the conclusion of his paper on the different methods of treatment of the strictures of the urethra, draws the following inferences. 1. The stricture ought possibly to be discovered and treated during its stage of inflammation, as only in this case permanent results without danger of relapses can be achieved. 2. Such operative treatment ought to be decided upon, which is most suitable to the stage and the character of the stricture. Accurate diagnosis can be ascertained by external palpation and by internal examination with the urethral sound, and, after sufficient dilatation, by the endoscope. 3. Gradual dilatation, followed by gentle cauterisation, is the best treatment of a stricture during its inflammatory stage. 4. In strictures caused by infiltration, and fibrous metamorphosis of the submucous cellular tissue, the most satisfactory results will be obtained, without danger of more serious relapses, by temporary, and, if possible, constant dilatation; far better results than either by internal or by external urethrotomy. 5. After the dilatation and cessation of the traumatic inflammation, the examination of the seat of the stricture by means of the endoscope will be instructive, and if remainders of blennorrhœic processes at the seat of, or around, the stricture should be visible, these must at once be efficiently treated, by which precaution early and grave relapses may frequently be guarded against. 6. In strictures during the callous (plastic) stage, we can, if we succeed in provoking resorption of the hypertrophy of the cellular tissue around the urethra, by means of fomentations, warm baths, and massage, obtain by temporary dilatation the same good results as in the afore-described cases. If, however, the callous tissue cannot be reduced by resorption, the indication for urethrotomy becomes evident, and, according to the author's views, the external operation will be preferable to the internal. In peri-urethral abscesses, false passages, and complications with fistula, external urethrotomy is unconditionally to be performed. 7. Ring-shaped strictures of the cellular tissue near the external orifice of the urethra, of small extent, strictures caused by ulceration, and valvular strictures, are best relieved by internal urethrotomy. 8. Cicatrised strictures, in consequence of traumatic injuries, are most efficiently removed by external urethrotomy, in which operation the radical excision of the cicatrised portion of the urethra possesses great advantages in every case, in which the complete union of the mucous membrane is feasible. If, however, the great extent of the cicatrix renders perfect union impossible, serious relapses may be apprehended. 9. The forcible rupture (divulsion)

of the stricture ought always to be avoided, as the injury, laceration, and bruising of the healthy or less diseased portions of it, lead to traumatic cicatrous strictures. Professor Antal (in No. 15 of the same *Vierteljahrsschrift*) describes his aero-urethroscope, which is for dilatation of the urethra by forcible inflation. The instrument consists of a tube of 2, 4, 6 centimètres (¾, 1½, 2 inches) in length, furnished at one end with an obturator, the concavity of which, after introduction of the cannula into the urethra, receives the glans, and which, on lifting the penis, hermetically closes the passage. After adaptation of the cannula, the ocular portion of the instrument is fixed, which likewise has an air-tight arrangement, and at its inferior side is connected with a tube, through which, by means of double India-rubber bellows, air is inflated into the urethra. In order to guard against the entrance of air into the bladder, one assistant compresses the urethra, either from the bulbus or the rectum. By this contrivance a portion of the urethra, extending several centimètres in length from the interior termination of the tube, is distinctly brought to view. The walls of the urethra will not equally expand, transversal rings will form, simulating the aspect of the trachea. Although the urethra, in consequence of the pressure, appears somewhat paler, the variations in colour can be distinctly recognised. Professor Antal, for examination of the anterior portion of the urethra, employs an instrument of only 1–2 centimètres (⅜–¾ of an inch) in length. FERD. ADALB. JUNKER, M.D.

27. *Palmer on Boric Acid for Sterilising Urine.*—Dr. E. R. Palmer writes on this subject as follows in the *American Practitioner and News.* The two prime dangers in the operation of internal urethrotomy are urethral fever and hæmorrhage, presuming, of course, that the operator has assured himself of the soundness of his patient's kidneys before operating. In a recent conversation with an eminent surgeon of one of the New York hospitals, he remarked in response to a statement made by the author, that 'the millennium in urethral surgery would be reached whenever the means was discovered of sterilising the urine by internal medication.' The ground for this strong statement was the fact that urethral fever, that dread of operators upon the urethra, is due to infiltration of the tissues of the body by a germ-laden urine. About the only attempt that has, up to quite recently, been made to prevent urethral fever from following urethrotomies and kindred operations, has been the internal exhibition, prior to the operation, of quinine and the subsequent use of antiseptic injections. Dr. Palmer's remark that called forth this surgeon's statement was to the effect that, by the free administration of boracic acid for twenty-four hours before, and for some days subsequent to the operation, the urine can be rendered absolutely sterile, and thus, without any quinine whatever, all danger of urethral fever may be avoided. At that time his experience with this agent thus given was hardly sufficient to warrant a positive assertion. Something less than a year ago he ordered, in a case characterised by purulent and fermenting urine, the exhibition of boric acid in ten-grain doses. The effect for good was so immediate and striking, that he determined to use the remedy instead of quinine in his next urethrotomy, having several times previously encountered severe fevers in this operation, despite the free exhibition of quinine. In some forty subsequent urethrotomies, several for strictures of small calibre, a number under adverse circumstances, Dr. Palmer has had but one case of urethral fever. In that case, operated upon in the practice of a neighbour physician for stricture of small calibre in a negro, the attendant, by some misunderstanding, omitted the boric acid after the first subsequent day. A violent chill, with temperature of 105° rapidly following, occurred on the third day. The bladder and urethra were at once washed out with boracic acid, and its internal exhibition in twenty-grain doses renewed. Happily the patient recovered, having served, if but in a negative way, to demonstrate the value of boracic acid as an internal antiseptic. Dr. Palmer usually employs ten grains in compressed tablets every three hours, though as high as thirty grains every three or four hours may be given without any irritating or otherwise injurious action upon the alimentary canal. Full antiseptic precautions are always employed as regards the instruments used, and in most cases the writer also washes out for several days the bladder and urethra with an ordinary hot boric and bichloride solution, which he considers to be an admirable means for arrest of hæmorrhage, in addition to those already laid down in works on the treatment of stricture. The misgivings with which he formerly performed this wonderfully salutary operation are, he states, now wholly gone. Hæmorrhage, the other danger, is growing more and more rare under improvements in instruments and operative procedure, and when it does occur is ordinarily easy of control. Cucaine, of course, has fully demonstrated its value in penile surgery. The sterilising bath used by Dr. Palmer for his instruments is a saturated solution of hydronaphthol. He considers it to be much superior for that purpose to carbolic acid.

MEDICINE.

RECENT PAPERS.

28. AMPUGNANI.—On the Course of the Fever Typhoid and Pneumonia. (*Congresso Medico di Pa Gazz. degli Ospitali*, Dec. 7, 1887.)

29. HEITZMANN.—On Pruritus of the Vulva. (*Zeit. für Therapie*, Nos. 1, 2, 3, 1887, and *Centralbl. für die gesammte Therapie*, December 1887.)

30. ADAMKIEWICZ.—On the Treatment of Neuralgia by Cataphoresis. (*Deutsche Med. Wochensch.*, No. 39, 1887, and *Centralbl. fur die gesammte Therapie*, December 1887.)

31. SANDOS.—On the Pathology and Treatment of Pernicious Anæmia. (*Correspondenz-Blatt. für Schweizer Aerzte*, No. 18, 1887, and *Centralbl. für die gesammte Therapie*, December 1887.)

ART. 28. *Ampugnani on the Course of the Fever in Typhoid and Pneumonia.*—Ampugnani read a paper on this subject in the Italian Medical Congress recently held in Pavia. In the Medical Clinic of Genoa, to which he is attached, it has been the custom for the last few years to take the temperature in the axilla hourly in all fever cases. With this material, comprising observations of over 100 cases of pneumonia and 200 of typhoid, he has undertaken a series of researches to illustrate the course of the temperature in the diseases in question. Meanwhile the following are the principal corollaries which may be deduced from his numerous tables:—With regard to typhoid fever: I. In typhoid fever

the temperature oscillates in the course of the day between relatively wide limits, presenting appreciable differences between one hour and another; this variation may exceed 1°. II. The greatest oscillation between the maximum and minimum of the twenty-four hours is found in the first three weeks, these oscillations are ordinarily of 2° to 2½°, sometimes touching as a maximum 3°·3. In this period, however, the 7th, 14th, 15th, and 16th days are exceptional; on these days the limits of variation are less, and are between 1°, 2°, and 1°·8. III. From the 22nd day onwards the oscillations are less, being under 2°, and in the later days under 1°. IV. In cases running a fatal course the oscillations are commonly less and the fever has a more markedly continued character. V. The greatest depression occurs in the morning hours between 7 and 10. On the 5th, 14th, and 21st days the depression, however, is anticipated, and occurs between 4 A.M. and 7 A.M. VI. The highest temperature occurs generally from 3 to 6 in the afternoon and then falls to midnight. In fatal cases, however, the maximum is reached later towards midnight. VII. High temperatures are not necessarily of evil augury; indeed, the highest temperatures recorded occurred in patients who recovered. As a rule in the typhoids who die the temperature oscillates between 39° and 40°, and the cases are very few in which these limits are exceeded. In acute fibrinous pneumonia it was found: I. That the temperature in the course of the day oscillated between certain limits, offering appreciable differences between one hour and another, the oscillations varying from $\frac{4}{10}$ and $\frac{6}{10}$ to 1°. II. The greatest oscillations occur in the first five days and are ordinarily from 1° to 1½° between the maximum and minimum of a day. Exceptionally they may reach a maximum of 3°. In the following days the variations are less, and the difference between the maximum and minimum oscillates betweeen 0°·5 and 1°. III. In fatal cases the oscillations are as a rule less, and the fever is more continued in character. IV. The maximum depression occurs in the morning, on the first day between 8 A.M. and 9 A.M. From the fourth day onwards the depression is anticipated and takes place between 4 A.M. and 5 A.M. V. The greatest elevation is generally between 7 P.M. and 9 P.M. during the first five days; on the following days it is earlier, generally between 4 P.M. and 6 P.M. VI. In fatal cases the maximum elevation of the day is reached earlier and lasts longer. VII. In cases with slow resolution the greatest elevation, instead of lasting two to three hours as happens normally, lasts longer, for six hours or more. VIII. High temperatures are not of bad prognostic; the highest temperatures observed belong to patients who recovered. As in typhoid, in fatal cases the temperature oscillated between 39° and 40°, and in very few cases exceeded these limits.

G. D'ARCY ADAMS, M.D.

29. *Heitzmann on Pruritus of the Vulva.*—Dr. J. Heitzmann, in his paper on Pruritus of the Vulva, distinguishes between local conditions and general disease as causes of this troublesome affection. The multifarious local causes are: the long round worm, ascaris lumbricoides and thread worms, ascaris vermicularis; decomposition and formation of fatty acids of the secretions of the vulva; decomposition of the urine in consequence of deficient muscular energy of the bladder and the sphincters; masturbation; catarrh of the vagina and of the vulva, varicosities, excoriations, fissures, erosions, ulcerations, herpes, eczema in its various forms, cicatrices, senile alterations of the living membranes, and finally pruritus as genuine neurosis. Diabetes mellitus is the principal, perhaps the only general disease which brings on pruritus. The first condition in the treatment of this affection is, if possible, the removal of its cause. There is sometimes a considerable enlargement of the nymphæ, the ablation of which is the only rational surgical treatment of pruritus. Before resorting to this operation, however, other local affections, viz., blennorrhœa, fissures, &c., ought to be cured. Abrasion of the mucous lining will suffice only in slighter cases. Cauterisation of the clitoris has generally a merely transient effect. Pruritus is particularly obstinate, if, in consequence of blennorrhœic infection trachoma pudendorum has formed. Eczema occurs in its four principal forms: the moist, the scaly, the pruriginous, and the marginate. In the first form dusting with a powder of flowers of zinc and amylum (1 : 10), and later on a lead-ointment made of vaseline have proved most efficient; the dry, scaly eczema is best treated by painting with tar, the pruriginous eczema, with tar-soap or inspissated beech-oil, and the marginate with alkaline soap liniment or green soap. The ablation of the mosslike vegetations at the inner surface of the labia gives generally only temporary relief; strong astringents will be more efficient. Excision of cheloid cicatrices is not of much use, as new cicatrices will soon replace them. Massage, and, if necessary, continued expansion (*Auszerrung*) of the cicatrix will give more satisfactory results. The use of strong solutions of carbolic or salicylic acid, which have been so much recommended, is contra-indicated in senile pruritus of the vulva. In this form painting with tincture of butchers' broom (Tinct. Rusci), or with French cognac, will give relief. The most obstinate form to any kind of treatment is the neuralgic pruritus without local alterations, which in some cases will yield to cucaine or to the application of dry cold by means of the temperature-regulators, devised by Dr. Heitzmann, or of Leiter's coils. Pruritus in diabetes will cease without any local treatment, by the successful treatment of the general disease. Diabetes will only exceptionally cause local pruritus confined to the vulva alone; if such, however, is met with, and no other palpable causes can be discovered, the examination of the urine for sugar, and careful investigation of the general condition of the patient ought not to be neglected.

30. *Adamkiewicz on the Treatment of Neuralgia by Cataphoresis.*—Dr. Adamkiewicz, Professor of General and Experimental Pathology of the Jagellonian University at Krakow, communicates a series of cases successfully treated by his method of cataphoresis, of which one typical case may serve as an illustration. A merchant, aged 64, had been suffering from most violent neuralgic pains of the right supra-orbital nerve. The attacks had commenced three months previously, and in the course of time gradually increased both in frequency and intensity. They succeeded each other for three weeks, with barely any interruption, and entirely deprived the patient of sleep day and night. Even any attempt to speak immediately brought on a severe attack. Owing to the agonising pain caused by every masticatory movement, the patient finally abstained from solid food. When seen the first time by the Professor the attacks followed each other at intervals of two to three minutes; they were most violent, and made the patient writhe and sway, and rendered

him, although a man of great determination and self-control, unable to refrain from loud moaning. Pressure on the diseased nerve at its passage through the supra-orbital notch was very painful. To this place an electrode, charged with chloroform, was applied and connected with the positive current, which was gradually increased to seven milliampères, and decreased again to nought, after having acted in this power on this sensitive spot, whereby the neuralgic attacks were completely checked. Half-an-hour afterwards another, but considerably slighter, attack followed, which was immediately arrested by a renewed cataphoresis. The patient, on the following day, reported that he had enjoyed a refreshing sleep during the night, that he felt comfortable, and was able to speak without danger of inducing neuralgic pain; he had only five slight attacks of short duration during 24 hours. He was cataphorised only once daily during the following five days, after which, as the spontaneous attacks had entirely ceased, the cataphoretic treatment was discontinued. The attacks not having returned during the subsequent week, and only slight pains having been brought on by the mastication of solid food, the patient was several times again cataphorised. After longer periods without treatment, the attacks returned. The manner of application, and the results of the cataphoresis, was the same in the other cases, from the reports of which it is evident that cataphoresis succeeds in curing, or at least in suppressing for a longer period, neuralgia, and that this effect takes place the sooner, the more recent the complaint. Of three cases which had obstinately resisted every other kind of treatment, two were cured by cataphoresis, one, of four weeks' duration, after three applications, and the other, which had commenced only four days previously, by one single use. This treatment proved likewise beneficial in chronic neuralgia, and produced, at least temporarily, great relief; the duration of the single attacks was shortened, and the sensibility of the diseased nerves lessened. The deep situation of the affected nerves, and pathological conditions which give rise to neuralgic pains and are not amenable to treatment, are unfavourable for the action of cataphoresis, besides the long duration of the complaint. The situation of the nerves is not a matter of indifference in the cataphoretic treatment, because the depth into which the current passes is dependent on its intensity, which cannot safely increase beyond a certain degree. Therefore sciatica in stout persons will be less benefited by cataphoresis than neuralgias of the intercostal, occipital, and especially of the fifth nerve, and of this particularly of the supra- and infra-orbital branches, which also Professor Hirt of Breslau has successfully treated by this method. Nevertheless cataphoresis should also be tried in sciatica.

31. *Sandos on the Pathology and Treatment of Pernicious Anæmia.*—Dr. Paul Sandos reports the case of a female patient, aged 31, which presented all the typical symptoms of pernicious anæmia, viz., great pallor, extreme weakness, irregular fever, retinal apoplexy, and disturbances and irregularities of the organs of circulation and digestion. Bland's steel-pills (ferr. sulph. pur., potass. carb. pur., āā four drachms; tragacanthi q. s. ut f. pill. No. 100) and pepsine with hydrochloric acid had no effect, and the condition of the patient grew worse. Appetite entirely failed, and the debility became excessive; she was no longer able to sit up in the bed, was listless and apathetic, ceased to reply, and refused any kind of nourishment. The breath was most offensive, the œdema about the ancles had increased, and the pulse rose to 120. A speedily fatal termination was apprehended. Under these circumstances Dr. Sandos resorted to washing out the stomach. Only a small quantity of curdled milk was evacuated, and the washing out was continued until the water passed off perfectly clear. The patient immediately felt greatly relieved, and was enabled to drink small quantities of milk and beef-tea during the same day. The fever completely ceased after this first washing out the stomach, and never returned. Further washings out improved the general condition of the patient, who left the hospital perfectly well. Dr. Sandos draws from this case the following conclusions: 1. The disturbances of the digestive organs, which occur during the course of pernicious anæmia, and which hitherto were considered as merely symptoms, seem, at least in certain cases, to be rather the cause itself of the disease. 2. These digestive disturbances very likely set up decomposition and fermentation in the stomach and intestinal canal, the resorption of products of which is able to call forth the symptoms of pernicious anæmia. 3. Washing out the stomach, combined with enteroclysis, seem to be the most adequate treatment of cases originating from this cause. 4. In cases of this kind the designation of the complaint 'pernicious anæmia' might be changed into the more appropriate term, 'dyspeptic anæmia.'

FERD. ADALB. JUNKER, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

32. PAOLETTI.—Action of Alum in Typhoid Fever. (*Congresso Medico di Pavia, Gazz. degli Ospitali*, Dec. 14, 1887.)

33. BERTALERO, P.—Aniline in the Treatment of Tuberculosis. (*Gazz. degli Ospitali*, Nov. 30, 1887.)

34. ZAHOROWSKI, DR., AND WIKTOR, DR. J. K.—Cucaine in Dysentery. (*Wiadomosci Lekarskie*, No. 3, 1886, pp. 85 and 86.)

35. BAKHÜTOFF, DR. KONSTANTIN S.—On Carbolic Acid in Diphtheria. (*Proceedings of the Caucasian Medical Society*, No. 10, 1886, p. 294.)

36. KRASNOGLADOFF, DR. E. I.—A Note on the Action of Root of 'Delphinium Consolida' or 'Jivokost.' (*Proceedings of the Caucasian Medical Society*, Oct. 16, 1887, p. 32.)

37. KOBLER.—On Phenacetine. (*Der Fortschritt*, No. 22, Nov. 20, 1887.)

38. LUBLINSKI.—On the Treatment of Tuberculosis of the Lungs and the Larynx with Creosote. (*Deutsche Med. Wochensch.*, No. 38, 1887, and *Centralbl. für die gesammte Therapie*, November 1887.)

ART. 32. *Paoletti on Action of Alum in Typhoid Fever.*—Alum was first used as a hæmostatic, but the knowledge of its antiseptic power led to its employment as a means of combating abnormal intestinal fermentations, certainly not the last cause of the fever in typhoid. This action is shown in a series of sixty cases treated successfully by almost the exclusive use of alum.

33. *Bertalero on Aniline in the Treatment of Tuberculosis.*—Aniline, as a remedy in tuberculosis,

was first proposed by Prof. Kremianski in the Medical Congress at Moscow (*see* LONDON MEDICAL RECORD, June 15, 1887, Art. 6972). In very weak solutions it kills the tubercle-bacillus, and these weak solutions are harmless to the human organism. Bertalero has obtained very striking results with this treatment, and in this paper gives his experience as shown in eight carefully selected cases. Of these, four were in the first stage of the disease, three at the beginning of the last stage, and the eighth had apparently but a few weeks to live. All had a family history of phthisis. The aniline was given internally and by inhalations in Siegel's steam spray. After a few weeks of treatment the condition of the patients markedly improved, the fever, night-sweats, and cough being much diminished; the sputa became less purulent and contained very few bacilli; the weight of the patients, too, increased. He concludes from the result of treatment in these cases that in aniline we have a remedy of great power in pulmonary and intestinal tuberculosis; that in the first stage of the disease its action is certain; that in daily doses of 50 to 60 centigrammes internally and of 1½ grammes by inhalation it is innocuous to the human organism, and may be continued without interruption for months. He, however, recommends its occasional suspension, so that the organism shall not become accustomed to the remedy. To render the aniline more soluble in water, and consequently more easily assimilable, a few drops of alcohol should be added to it. If given for a long time, the skin may become stained bluish-yellow, but this discoloration soon disappears if the remedy is suspended. G. D'ARCY ADAMS, M.D.

34. *Zahorowski and Wiktor on Cucaine in Dysentery.*—Dr. Zahorowski describes (*Wiadomosci Lekarskie*, No. 3, 1886, p. 85) a case of dysentery in a boy of 3, in whom violent and almost incessant tenesmus not only caused an agonising pain to the little patient, but also threatened to give rise to prolapsus of the rectum. To obviate that complication, and to relieve the child's state, the writer resorted to hourly painting the rectal mucous membrane by means of a brush with a 16 per cent. solution of hydrochlorate of cucaine. After a few paintings the tenesmus ceased, and the stools, though still frequent, became quite painless, the patient subsequently making a rapid and steady recovery under the use of calomel, with castor-oil, and myrobolan. Referring to Dr. Zahorowski's case, Dr. J. K. Wiktor (*ibid.* p. 86) writes that he also tried cucaine, in the shape of suppositories, containing each 25 milligrammes of the alkaloid, in a case of dysentery in an adult man, the tenesmus and pain rapidly disappearing. He adds that the use of cucaine in the form of a suppository is, in similar cases, more convenient and more effective than any painting.

35. *Bakhütoff on Carbolic Acid in Diphtheria.*—Dr. Konstantin S. Bakhütoff, of Tiflis, says (*Proceedings of the Caucasian Medical Society*, No. 10, 1886, p. 294) that during an epidemic of diphtheria which raged in the Stavropol (North Caucasian) Government in 1879-81, he, in common with many other Stavropol practitioners, used the opportunity to give an extensive trial to the carbolic treatment of the disease. Of his 400 cases, in upwards of 200 he employed paintings, with from 11 to 27 per cent. carbolic glycerine. (℞ acidi carbolici crystall., ʒj. ʒij. ʒiij.; spirit. aromatici, glycerinæ, āā ʒss. M. S. To paint the fauces every two or three hours.) Like his colleagues, Dr. Bakhütoff came to the conclusion that 'a local treatment of faucial diphtheria with strong solutions of carbolic acid, fully deserves preference to any other local means.' This is so because the acid possesses (*a*) powerful disinfectant properties which are of paramount importance in septic and sloughing processes; (*b*) strong caustic ones which are extremely advantageous in the presence of tendency to bleed during the period of the separation of pseudo-membranes; and (*c*) anodyne properties which enable the patient, at least within an hour after a painting, to swallow with fair comfort, not only medicine, but wine and food. This effect of the remedy is more valuable since the good feeding of a diphtheritic patient represents a *conditio sine quâ non* for successful treatment. Dr. Bakhütoff, however, does not regard the acid as a 'specific' for diphtheria; in fact he does not admit the existence of any 'specific' antidiphtheritic means whatever. He eulogises phenol only as a comparatively best symptomatic remedy. Starting from Buhl's theory that the lesion of the fauces and respiratory tract is nothing else than a secondary phenomenon, a local manifestation of a primary constitutional infection, Dr. Bakhütoff invariably administers in all cases of diphtheria (from the very beginning) quinine and salicylate of soda, as well as a nourishing and strengthening diet (milk, bouillon, brandy, wine, &c.). [Details concerning the carbolic treatment of the cases mentioned above may be found in Dr. Bakhütoff's *St. Petersburg Inaugural Dissertation* (1881) on the 'Medical Topography and Sanitary State of the town Stavropol.'—*Rep.*]

36. *Krasnogladoff on Knight's Spur* (*Delphinium consolida*) *in Scrofula.*—Dr. E. I. Krasnogladoff, of Tiflis, draws attention (*Proceedings of the Caucasian Medical Society*, Oct. 16, 1887, p. 32) to an old remedy which has been long ago forgotten by scientific therapeutics, but is still often used in popular medicine as an excellent remedy for scrofula. It is the root of a variety of knight's or lark's spur of *Delphinium consolida*, *Linn.* (Russ. *jivokost*, or 'live bone,' that is, the plant which can call dead bones to life). A scrofulous and syphilitic lady-patient of the author's had suffered for a score of years from extremely obstinate ulcers on both feet; the ulcers began of late to grow alarmingly worse, with the concomitants of emaciation, hepatic pain, jaundice, gastric disturbance, and sleeplessness. The lady accidentally met a soldier, who at once recommended her to try the root of knight's spur, both internally, in the form of a strong cold infusion made with *vodka* (aqua vitæ), and locally, in the shape of a decoction. Following the advice, she drank the infusion, and bathed her feet with the decoction every day for three weeks. No other means of any kind were simultaneously used. By the end of the time stated the ulcers healed, and her general condition became normal. She has remained quite well ever since. Dr. Krasnogladoff mentions also several other cases of scrofula cured by knight's spur after sarsaparilla and Colbert's essence had utterly failed. On the whole he thinks that *Delphinium consolida*, a plant which is very common in some Transcaucasian regions, may prove by far superior to sarsaparilla, which is imported into Russia from afar and is sold at a very high price. Following the author's suggestion, the Caucasian Medical Society have taken the matter up, and will give the root a fair and extensive trial. [The plant is not uncommon also

in Switzerland, Germany, Austria, Alsace, &c., as *Koch's Flora* shows. *A priori*, certainly, it would not be a therapeutical fool's errand to examine its biological action on the animal system, since, being a member of the fam. *Ranunculaceæ*, and, in addition, belonging to the tribe of *Helleboreæ aconiteæ*, *Delphinium consolida* must, undoubtedly, contain some very powerful active principles.—*Rep.*]

V. IDELSON, M.D.

37. *Kobler on Phenacetine.*—Dr. G. Kobler communicates his investigations and observations in Professor Dr. von Bamberger's clinic for internal diseases, on the therapeutic value as an antipyretic of the phenacetine (para-acetophenetidine). Phenacetine was first produced by Dr. O. Hinsberg at Elberfeld, and examined for its physiological properties conjointly with him by Professor Kast, of the University of Freiburg (*Centralbl. für die Med. Wissensch.*, No. 169, November 9, 1887). It is an acetyl compound of the phenetidine—*i.e.* the ethyl-ether of paramidophenol, and has the following constitution :

$$C_6H_4\begin{cases} O,C_2H_5 \\ NH,(CO\text{-}CH_3). \end{cases}$$

Its composition is therefore analogous to that of antifebrine (acetanilide). It exists as a faintly reddish, tasteless, and odourless powder, dissolves with difficulty in water, better in glycerine, and most readily in alcohol, especially by heating this. It is insoluble in acid and alkaline fluids. Experiments on its solubility in acid, gastric juice, and in the pancreatic extract at the normal temperature of the body, gave negative results. The preparations employed by Dr. Kobler for his investigations were exclusively from the chemical works of Dr. O. Hinsberg (late Bayer and Co.) at Elberfeld. Doses of 0·5–0·7 of a gramme (eight to nine grains and a half) had no influence on the general condition of healthy men, and the normal temperature remained unaltered. In no case of febrile disease, however, did a marked antipyretic effect, even after comparatively small doses of 0·3–0·4 of a gramme (five to seven grains) ever fail. At the first trials, in consideration of the ignorance of the effects of this new remedy, only small doses of 0·2–0·4 of a gramme (three to seven grains) were given. Decrease of temperature was always observed, but only of slight intensity and short duration. Only after having learned the perfect harmlessness of this preparation, were larger doses employed, and at present the rule has been established in Professor von Bamberger's clinic to prescribe at first not more than 0·5 of a gramme (eight grains), in order to be able to notice any individual modification of the action of this medicament in different patients. Larger doses of 0·6–0·7 of a gramme (ten to twelve grains) commence with the subsequent indications for the antipyretic treatment, although generally already after 0·5 of a gramme (eight grains) the desired effect is obtained. Real idiosyncrasy against this remedy has hitherto not been observed. Vomiting and nausea, so frequently caused by other antifebrile medicines, are never produced. The phenacetine, although perfectly tasteless, is generally prescribed in wafers on account of its insolubility, in which form also the greater exactness of the dose really swallowed is secured. According to present experience phenacetine may rank for its reliability with every other approved modern antipyretic, over which it has the advantage of being absolutely free from injurious after-effects.

38. *Lublinski on the Treatment of Tuberculosis of the Lungs and the Larynx with Creosote.*—Dr. W. Lublinski treated only such patients with creosote, in whom the affection of the lungs was still in its first stage, and no extensive disintegration or no great prostration had yet taken place. He considers graver complications, especially intestinal tuberculosis, amyloid degeneration, and high or continuous fever, to contra-indicate the use of creosote, but he prescribes it without hesitation in hæmoptysis. Dr. Lublinski treated in the course of several years considerably more than 400 patients with creosote in his polyclinic, but can in this paper report only on 210 cases, whom he was able to keep under observation, having lost sight of the remainder. Of these, who, with the exception of 32, attended the polyclinic, 74 were in the first stage of the disease; the others were suffering from more advanced forms of the disease. Among the first series there were 12 laryngeal complications, among the second 34. All the patients carefully registered their temperatures several times daily, and fever was noticed only exceptionally, and in the slightest degree by those of the first series; in the second series the temperature rarely rose above 39° C. (102°·2 Fahr.), and in the majority of patients, when feverish, the temperature was about 38° C. (100°·2 Fahr.). Tubercle-bacilli, for which during the last four years regular search was made, were never absent. The proportion of successful cures is relatively small. Of the 178 patients treated in the polyclinic 12 may so far be considered cured, as the auscultation evinced normal or enfeebled respiratory sounds and absence of rhonchi, and on percussion no signs of pulmonary condensation and contraction or of diffused dulness were present. The weight of the body had increased, the patient having gained flesh, and the general appearance and condition being satisfactory. A far better result was achieved with the 32 patients who were treated in their own homes. In fifteen of these cases who continued under observation for three to four consecutive years, the circumscribed affection of the apex perfectly disappeared in eight patients, but only twice in the remaining seventeen cases. The treatment of the greater number of these patients was, moreover, assisted by a long sojourn in the country or in the mountains. Of the remaining 166 polyclinical patients, in 24 a considerable, in 82 no improvement was observed, whilst in the rest progress of the pulmonary affection and evident deterioration of the general condition had taken place. Of the private patients, besides the eleven recoveries, four had considerably improved, but in all the remaining the treatment had failed. Dr. Lublinski observed, as Professor Fräntzel, of Berlin, had likewise pointed out, that in the improved patients, whilst their weight increased, and cough and expectoration lessened, the pain in the chest and the fever also entirely ceased for a time; but that barely any obvious diminution in the number of the bacilli in the sputa could be perceived.

Laryngeal affections occurred in 46 cases; of these, 13 were simple infiltrations, the remaining 33 were ulcerations. Creosote has no effect on the infiltrations. In the stage of ulceration both the internal use and inhalations of creosote had signally failed. The local application of creosote—

℞ Creosoti, 0·1 (one grain and a half);
Alcohol rectif, 2·0 (half a drachm);
Glycerinæ, 8·0 (two drachms)—

to the ulcerated sores proved beneficial in nine cases;

the ulcers rapidly healed by cicatrisation, and in some no recurrence took place for several years. The creosote, in the polyclinic, was generally prescribed in its alcoholic solution, less frequently in cod-liver oil. In the first form usually :

℞ Creosoti, 2·0 (half a drachm) ;
Alcohol absol.,
Aq. menthæ, āā ad 200·0 (six ounces).

D.S. 2-4 table-spoonfuls daily in water. The cod-liver oil with 1 per cent. of creosote, 2-3 tablespoonfuls daily, was only employed during the cold season.

In private practice the creosote was given either in the prescription of the French author, or in capsules each containing 0·05 (one grain) of creosote, commencing with two, then three, and so forth in increasing numbers daily ; in some cases gradually to as much as 0·5 (eight grains of it) without causing any inconvenience.

Sommerbrodt's combination of creosote with Tolu balsam is very beneficial, owing to the effect of the balsam in diminishing the secretions, provided that the gastric functions be not impaired ; pills, however, according to Hager's prescription, have not proved satisfactory. Creosote, in whatever form, ought never to be taken on the empty stomach, but always after meal-times. The principal requisite in the use of creosote is its perfect purity, and its being made of beech-tar. Such a preparation, however, is but rarely to be obtained ; the creosote, common in commerce, is made of coal-tar and is five times cheaper than the genuine preparation from beech-tar, from which it is distinguished by being clear like water, but changing on exposure to the sun to a reddish tint. The purity of the genuine preparation can be easily tested by dissolving it in 80 parts of water and adding to this solution one minim of liquor of perchloride of iron ; which forms in the genuine creosote a dark-brown precipitate, and in its substitute made of coal-tar, as in carbolic acid, a blue sediment. Genuine creosote, besides, is of neutral reaction, and requires 200 parts of glycerine for solution, whilst the coal-tar creosote is acid, and readily dissolves in equal parts of glycerine. Moreover, the black coloration of the urine after the use of the spurious creosote is an unerring sign of its origin and its impurity from carbolic acid ; the genuine beech-tar creosote has no effect on the colour of the urine. The improvement of appetite and the increase in weight were always considered as important features of the value of the creosote treatment. Dr. Lublinski has known several patients who had gained within four weeks 4-5 kilogrammes (8-10 pounds) in weight ; lesser increases of 1-2 kilogrammes (2-4 pounds) occurred very frequently. He recommends according to his present experience the careful use of the genuine creosote exclusively in gradually increasing doses in tuberculosis, especially in its early stages. FERD. ADALB. JUNKER, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

39. JEANNEL, DR.—A Case of Fatal Retention of Menses in Abnormal Uterus. (*Arch. de Tocologie*, Oct. 30, 1887.)

40. COE, DR. H. C.—On a Case of Metrorrhagia at Puberty. (*Arch. de Tocologie*, Oct. 30, 1887.)

41. VICENTE, DR. MANUEL.—On a Case of Vicious Insertion of the Placenta and Albuminuria. (*Nouv. Arch. d'Obstét. et de Gyn.*, Nov. 25, 1887.)

42. SCHULTZ, MADAME D.—On Exploration of the Female Ureters. (*Bull. Gén. de Thérap.*, December 1888.)

43. SARRANTE, DR. GACHES.—On a Case of Uterine Hæmorrhage (Fibroma) checked by Dilatation of the Uterus. (*Nouv. Arch. d'Obstét. et de Gyn.*, Nov. 25, 1887.)

44. MONTGOMERY, DR.—On a Case of Pregnancy complicated by Ovarian Tumour. (*Arch. of Gyn.*, November 1887.)

45. BANTOCK, DR. G. GRANVILLE.—Remarks on the Removal of Uterine Fibroids by Abdominal Section. (*Obstet. Gazette*, November 1887.)

46. AUVARD, DR.—On Plugging of the Uterus. (*Annales de Gyn.*, December 1887.)

47. AKSUETINA, DR. A. A.—On Asparagus Officinalis as a Uterine Hæmostatic. (*Proceedings of the Don Medical Society* for 1885, 1886, p. 17.)

48. DYMSZA, DR. H.—On Hypodermic Injections of Sodic Salts. (*Gazeta Lekarska* [=*Medical Gazette*], Jan. 2, 1886, p 23.)

49. OSHEROVSKY, DR. LAZAR J.—A Case of Metrorrhagia treated by Sodic Salts. (*Proceedings of the Caucasian Medical Society*, No. 5, 1887, p. 160.)

ART. 39. *Jeannel on a Case of Fatal Retention of Menses in Abnormal Uterus.*—M. C., twenty-six years of age, married, was admitted on March 29, 1886. She had an abdominal tumour of long standing, which had enfeebled her to such an extent as to menace her existence. She was unable to remember when she first menstruated, but said that she was 'regular.' On closely questioning her, however, it was evident that she was ignorant of what menstruation consisted, and had, in reality, only lost a small quantity of blood, lasting half an hour, many years ago. Never pregnant. She was unable to give any intelligible history of the appearance or growth of the tumour, but said that she suffered nearly every month from pain in the belly for three or four days at a time. As the tumour had increased in size she had suffered more and more from constipation and vesical tenesmus. The patient was a little, weakly woman, of cachectic appearance and extremely debilitated. The abdomen was distended in every direction, but median and transverse depressions were noticed crossing the umbilical region. The lower extremities and abdominal parietes were swollen and œdematous, with marked interference with the venous circulation. On percussion a tympanic note was obtained down to two fingers' breadth below the umbilicus, and a zone of dulness with its convexity upwards below that point. The dulness corresponded to an abdominal tumour, the outline and nature of which were not easy to make out on account of the abdominal distension. It was not fluctuating, scarcely movable, and was painful when compressed. It was somewhat irregular in outline, with an upper and lower lobe. On examination of the external genitals the clitoris was represented by a penis the size of that of a child of six or seven years of age, presenting a well-marked raphé on its inferior aspect, at the base of which was the meatus of the urethra, leading into the bladder, which was compressed between the tumour and the pubes. The orifice of the vagina was narrow but dilatable. The vagina was 7 cm. ($2\frac{3}{4}$ inches) in length. Through it could be felt a rounded tumour of pasty consistence, which completely filled the right lateral cul-de-sac, and impinged upon the anterior and posterior culs-de-sac. In the centre could be felt a small orifice corre-

sponding to the *os uteri*. The vaginal tumour was one with the abdominal tumour. The condition was classed as one of pseudo-hermaphrodism witn unilateral hæmatometra. On March 31, the patient having had a bath and the rectum having been evacuated, the vagina was washed out with a 1 : 1,000 solution of sublimate. She was too enfeebled to allow of an anæsthetic. A flannel bandage was placed round the abdomen to be tightened as the discharge took place. The vagina was then dilated as much as possible and an attempt made to introduce a uterine sound. This not succeeding, the most salient part of the tumour was punctured with a trocar, 4 mm. ($\frac{1}{8}$ in.) in diameter, through which escaped at once between three and four ounces of a chocolate-coloured syrupy liquid. The opening was then enlarged, but the discharge came away very slowly, small white masses, the *débris* of clots, obstructing the passage. The uterus was then carefully injected with a 1 : 2,000 solution of the sublimate, but with only partial success, the hæmatoma being of a semi-solid consistence. A slender pair of forceps was introduced into the uterus, and fragments of its contents withdrawn. These measures were followed by the loss of about seven ounces of blood from the wound itself, giving rise to anxiety on account of the peculiarly unsatisfactory condition of the patient. The operation took two hours, but the abdominal tumour had not visibly decreased in size. Altogether about a litre of liquid and clots had been removed, and it was thought desirable to adjourn further proceedings. Drainage-tubes were placed in the uterus, and the vagina was plugged with iodoform gauze. Three-quarters of an hour later the patient had an attack of syncope and died. At the autopsy a tumour was found occupying the true and the false pelvis and the abdominal cavity up to the level of the umbilicus, matting together the uterus, bladder, ovaries, rectum, colon, &c. The uterus was represented by a tumour of the size of a pregnant uterus at the sixth month. To the left, in the tumour, was a collection of clots forming an accessory tumour, the size of the first. To the left of the incision made during life was the *os uteri* quite patent and admitting a goose-quill, leading through the uterine walls to a cavity quite independent of the principal tumour, the latter being evidently the result of many years' accumulation of blood in one half of a bifid uterus, cut off from communication with the exterior. A rupture had taken place at some previous time at its upper end, and the clots were continued by the thickened and adherent peritoneum.

40. *Coe on a case of Metrorrhagia at Puberty.*—J. B., 13 years of age, in good health and well developed for her age, and of phlegmatic temperament. She began to menstruate about a year previously at irregular intervals. On one or two occasions the flow had been abundant but not excessive, and there was never any dysmenorrhœa. She left for the seaside in June just after a menstrual period (June 26), and while there she often remained up late and lived on a stimulating diet. She did not dance, however, nor take sea baths. On the evening of July 13 she went to bed without any abnormal sensation, but awoke in the night with cramp in the region of the stomach, soon followed by an abundant discharge of blood from the vagina. This continued, and the next day she presented all the appearance of a woman who has had a slight flooding after a confinement. A large blood-clot was found in the bed, which had evidently sojourned in the vagina and been expelled. The blood was of a bright colour, quite different from the ordinary menstrual discharge. The quantity was estimated at about twelve fluid ounces. The patient was kept in bed for three days and treated with 25 drop doses of extract of hydrastis Canadensis. On the fifth day she was allowed to go downstairs to lunch, the hæmorrhage having ceased since two days. During the meal she had a peculiar feeling in the epigastrium and went back to bed, when a fresh hæmorrhage occurred like the first, but less in quantity. The hydrastis failed to check the loss of blood, and large doses of ergot were given, together with the application of ice to the hypogastrium. A pint of hot water, containing two drachms of alum, was injected with some difficulty into the vagina. Under this treatment the hæmorrhage gradually diminished, and by the sixth day had ceased. Four days after the cessation of the last attack menstruation occurred at the proper date, and, though not painful, was more profuse than usual. She kept her bed for five days. The hæmorrhage was attributed to residence at the seaside, and did not return on her leaving.

41. *Vicente on a case of Vicious Insertion of the Placenta and Albuminuria.*—Madame B., 34 years of age, menstruated last in September 1886. She had borne six children after normal labours, and had never miscarried. She had been unwell since becoming pregnant, suffering particularly from dyspnœa and swelling of the legs and face. Her appetite and strength had gradually been getting less. In the sixth month of pregnancy she lost some blood and the hæmorrhage had recurred, preceded once or twice by copious hæmatemesis. Vaginal examination revealed nothing abnormal, but the patient (6½ months) was very weak and ill. The urine contained abundance of albumen. The case was diagnosed as one of vicious insertion of the placenta and albuminuria. Hot water injections and a milk diet did not modify the symptoms, and matters went on until, in the course of the seventh month, the patient was suddenly seized with syncope without any hæmorrhage, which persisted. Respiration was shallow and sighing, the heart-beat was feeble, the face and lips were livid, and consciousness was altogether abolished. Notwithstanding the most vigorous treatment this condition lasted twenty minutes. Labour was promptly induced after rapid dilatation of the *os uteri*, and a marginal insertion of the placenta was observed. A dead fœtus was removed without separation of the placenta, and marked improvement at once took place. No hæmorrhage followed, and the patient was able to leave her bed at the end of a fortnight, the albumen disappearing from the urine in the course of a few days.

42. *Schultz on Exploration of the Female Ureters.*—In 1874 Tuchmann first suggested the exploration of the ureters in females with the object of obtaining a specimen of the urine from each kidney separately for diagnostic purposes. The suggestion has since been taken up from several points of view ; some observers simply examining the condition of the ureters by touch, others seeking to procure the temporary obliteration of one or other canal, a third category advocating the catheterisation of the ureters. Palpation of the ureters is useful in arriving at a diagnosis in certain urinary affections and obstructions, and enables the medical man to detect and aid the passage of obstructing calculi. This procedure is carried out *per vaginam*. The

finger, slipping from before backwards, follows the urethra to its junction with the bladder, and thence to the anterior vaginal cul-de-sac. The field of observation is between the orifice of the urethra and the cul-de-sac. About half-way between the two the finger is turned slightly outwards towards the ureter which is to be palpated, and, on lightly pressing, the feeling of a hard cord, like an artery, will be perceived. In carrying out these observations it is necessary to possess a clear idea of the anatomical relations of the base of the bladder and the vagina. Compression of the ureter has only an interest for diagnostic purposes, and is less useful than catheterisation, which is certainly the most useful method of exploring the ureters. By its aid we are enabled to restore the patency of the canal after nephritic colic, to prevent retention of urine in the pelvis of the kidney, and to cut short the course of hydronephrosis. In five cases this procedure enabled nephrectomy to be performed, the opposite kidney being proved to be in good functional order, while in two others the operation was held to be contra-indicated on account of the unhealthy state of the corresponding organ. In two cases in which diagnosis was difficult between a floating kidney and an ovarian tumour, the fact that the course and direction of the ureter was normal being demonstrated, the diagnosis became easy. There are three recognised methods of catheterising the ureter—Simon's method, in which the urethra is dilated to enable the finger to serve as a guide to the orifice of the ureter; Newmann's method, in which the orifice is found by the aid of the endoscope. Both these methods, however, are inferior to that of Pawlik, who uses a metallic catheter with a bulbous extremity belonging to a soft catheter, which is continued by the first. The woman is placed in the lithotomy position ; the perineum is drawn down with a speculum, so as to stretch the anterior wall of the vagina; the catheter is then introduced into the bladder, and the point is directed towards the fundus, with an inclination to one side. A depression is found which leads to the orifice of the ureter. By gentle movements of rotation, raising and depressing the handle, the point will ultimately find its way into the ureter, which will be recognised by the ease with which the instrument glides forward, lateral movements being interfered with. On removing the plug, moreover, a jet of urine escapes. Catheterism of the ureter is very rarely followed by untoward symptoms (fever, abdominal pain, localised peritonitis, &c.). It is by no means easy of execution, owing to irregularities, anomalies, or pathological conditions of the ureter.

43. *Sarrante on a Case of Uterine Hæmorrhage (Fibroma) checked by Dilatation of the Uterus.*—Madame C., 47 years of age, had borne two children after normal labours. Ten years since, the patient first noticed a tendency to fatigue with a sensation of weight and pain in the region of the uterus. Three years ago these symptoms became more acute, and the menses became more frequent and more abundant. At the same time the abdomen began to increase in size, more particularly at the menstrual periods. She soon became a confirmed invalid. On March 11 she was scarcely able to walk, and said that the hæmorrhage had not ceased for two years past. The abdomen was the size and shape of a six months' pregnancy. A globular tumour could be felt, starting from the pelvis and rising to the level of the umbilicus. The percussion note was dull over the tumour, and resonant elsewhere. The tumour was intimately connected with the uterus, and moved with it. The uterus was normal in position ; by the aid of a speculum, blood could be seen trickling from the *os uteri*. The sound penetrated as far as it could be pushed without reaching the fundus, and the depth was found to be 25 centimètres (10 inches). On March 28 a laminaria tent was introduced into the uterus, and two others were subsequently passed in. The cavity was then washed out with sublimate solution (1 : 1,000). The hæmorrhage ceased immediately, together with the pain. On April 11, menstruation occurred, free from pain, and normal in quantity. The irrigations were continued from time to time, and the symptoms did not recur. As the menopause was imminent, no further treatment was thought desirable.

44. *Montgomery on a case of Pregnancy complicated by Ovarian Tumour.*—The patient, a married woman, aged 24, ceased to menstruate on August 15, 1885. For the year previous she had suffered occasionally from pelvic distress, difficult micturition, amounting at times to retention. Dr. M. was sent for on April 4, 1886, the patient believing herself to be in labour. The medical man in attendance was unable to find the *os uteri*, and failed in an attempt to pass a catheter. The uterus could be felt as high as the ensiform cartilage ; below, reaching nearly to the umbilicus, was a second spherical fluctuating tumour, evidently the bladder. By the vagina, an elastic mass was felt occupying the curvature of the sacrum, and reaching to the symphysis in front. The *os* was undilated. By means of a male catheter nearly two quarts of urine were drawn off. The pelvis was then found to be filled by a round smooth tumour, which had pushed the bladder and uterus completely out of the pelvis. It was found impossible to push the tumour out of the way, and the fact that the cyst was multilobular negatived the idea of tapping. Ovariotomy was therefore resolved upon, and performed through an incision in the median line through the abdominal parietes. The pedicle was ligatured with the Staffordshire knot, the tumour removed, the abdomen carefully cleansed, and the wound closed with silk sutures. The left ovary presented a cyst the size of an orange, but it was not thought desirable to remove it. Labour set in on the seventh day, a strong healthy child being delivered with the aid of the forceps, the perineum being considerably lacerated in the process. The second day after labour the temperature rose, the lochia became offensive, and the abdominal wound reopened. Death took place a fortnight after the operation. Dr. Montgomery regrets that he did not remove the uterus and its contents during the operation, when the unfortunate sequelæ would have been avoided.

45. *Bantock on Remarks on the Removal of Uterine Fibroids by Abdominal Section.*—At a meeting of the Obstetrical Society of Philadelphia, Dr. Bantock discussed the general subject of the removal of uterine fibroids by abdominal section. He pointed out that there were two methods of doing this—intra- and extra-peritoneal—and expressed a strong opinion in favour of the latter procedure. He alluded to the difficulty met with in relation to the pedicle in the various kinds of fibroids, and dwelt upon the precautions to be taken to provide against loosening of the ligature, and to secure asepticity of the parts operated upon. He announced that he had now discarded the use of all antiseptic agents, and the results of his operations showed a steady improvement.

46. *Auvard on Plugging of the Uterus.*—A pri-

mipara, on the fifth day after a normal labour, was seized with a copious hæmorrhage. Checked for a short time, it recurred more abundantly than before. The patient became blanched, covered with a cold sweat, and with a feeble, rapid pulse. The condition of the patient was so menacing that M. Auvard, having emptied the uterus of clots, and with every possible antiseptic precaution, plugged the uterus with iodoform gauze. The hæmorrhage ceased at once, and a fatal issue, which appeared imminent, was averted. On the following day the gauze was removed. It was stained throughout with blood, but was perfectly sweet to the smell. No recurrence of the hæmorrhage took place. M. Auvard is of opinion that we shall see the method of plugging the uterus revived in the treatment of flooding, after removal or expulsion of the ovum and in intra-uterine septicæmia after *curage* and cleansing of the uterus. ALFRED S. GUBB.

47. *Aksuetïna on Asparagus in Metrorrhagia.*—At a meeting of the Don (Novotcherkask) Medical Society, Dr. A. A. Aksuetïna, a local lady-doctor, showed (*Proceedings of the Don Medical Society for* 1885–86, p. 17) the herb of a wild *Asparagus officinalis* (Russ. *sparja*—most likely derived from the English 'sparage'), which is used in Russian popular medicine as a means for arresting flooding. She narrated also a case from her own practice, where the drug had been employed with good results. In a multipara, who had missed her menses once, there suddenly appeared metrorrhagia of a moderate intensity, which did not yield to the treatment by cold-water injections and absolute rest. By the end of two and a half weeks the patient, following the suggestion of a friend of hers, resorted to an infusion of asparagus, made of a handful of the herb to two teaspoonfuls of boiling water, one cupful of the infusion to be taken n the morning, and another in the evening. The bleeding gradually ceased before night came, and on the next morning a four weeks' fœtus, in a semi-putrid state, was expelled. Dr. Aksuetïna thinks that asparagus caused an energetic contraction of formerly atonic uterine muscular fibres, and thus enabled the womb to complete separation of an already semi-detached ovum.

48. *Dymsza on Hypodermic Injections of Sodic Salts in Metrorrhagia and Pelvic Peritonitis.*—In the *Gazeta Lekarska* (a Polish periodical), January 2, 1886, p. 23, Dr. H. Dymsza reports on remarkable therapeutic experiments carried out by Professor Chéron in St. Lazarus's Hospital in Paris since the summer of 1885. In the course of some researches in connection with verifying Luton's statements concerning the action of sodic salts in cholera, Dr. Chéron soon discovered that the salts were similarly very beneficial in gynæcological practice. A patient was suffering for two months from severe flooding, depending upon chronic endometritis with pelvic peritonitis. Uterine hæmorrhage markedly decreased on the next day after the very first injection of a solution of phosphate of soda (*see* below). Each subsequent injection was followed by further steady improvement. After eight injections the woman was completely cured, the discharge having entirely disappeared. Encouraged by such satisfactory results, Dr. Chéron resorted to the same treatment in eight other successive cases of pelvio-peritonitis, and in four of uterine bleeding caused by chronic endometritis. In every one of the cases rapid and permanent cure was obtained. The formula used was this: ℞ sodæ phosphat. crystalliz., sodæ sulphat., āā 6·0; aq. destill., 120·0. D.S. To inject from four to six grammes of the solution deep into a buttock or a thigh once weekly. The solution must be prepared on each occasion; it also must be carefully filtered, and only distilled water should be used, since ordinary water may cause suppuration at the spot of the injection, as actually happened in one of Chéron's cases. The injections must be made slowly, and followed by a thorough kneading of the part for several minutes. As to the *rationale* of the method, Dr. Dymsza believes that 'the introduction of alkalies into the circulation increases the systemic metabolism, since Liebig has experimentally shown that an increase in the amount of free alkalies in the blood accelerates the oxidation process.'

49. *Osherovsky on Hypodermic Injection of Sodic Salts in Metrorrhagia.*—The perusal of Dr. Dymsza's paper suggested to Dr. Lazar J. Osherovsky, of Sükhümkalë, to try (*Proceedings of the Caucasian Medical Society*, No. 5, 1887, p. 160) Professor Chéron's remedy in an extremely severe case of his own. A stout, anæmic, very irritable woman of 50, still menstruating, with a very large uterine interstitial fibroid of about 12 years' standing, sought the writer's advice, chiefly on account of a continuous and very profuse mucous discharge from her genitals and of occasional menorrhagia. About five years previously she had been ineffectually treated by ergotine discs internally, and, later on, by the hypodermic injection of the same drug. Neither was any benefit obtained from the use of hydrastis Canadensis. About a year before her coming under the author's care a violent flooding suddenly set in, lasting for more than a fortnight, with frequent swooning. Following the recommendation of Schroeder, Horvitz, Lebedeff, and Sotchava on one side, and that of Erb, Seeligmueller, and Lvoff on the other, Dr. Osherovsky resorted to a combined treatment consisting of subcutaneous injections of Bonjean's ergotine (after Simpson's formula, 2 or 3 grains every other day; on the whole 90 injections), and faradisation (15 sittings). A marked improvement (decrease of the discharge and menorrhagia, as well as of anæmia and irritability) gradually took place, so that the patient found it possible to discontinue every treatment for about 13 months. By the end of this period, however, an enormous metrorrhagia suddenly made its appearance one night. Vinegar [internally, a wineglassful at a time, as recommended by Dr. W. C. Grigg in the *British Medical Journal*, January 1884, p. 56, and subsequently by Dr. Nekhamës, of Saratov, in the LONDON MEDICAL RECORD, May 1885, p. 202.—*Rep.*] and vaginal hot-water injections arrested the bleeding for 5 or 10 minutes at a time only. The hæmorrhage markedly diminished only after a subcutaneous injection of 7 grains of ergotine. Under the influence of the latter (administered under the skin and internally), in combination with the internal administration of tinctura nucis vomicæ and opium [as suggested by Drs. Lombe Atthill, Grosholz, and Walker in the *British Medical Journal*, March 13, 1886, p. 492.—*Rep.*] metrorrhagia disappeared in about three weeks. But a week later it reappeared in association with a freshly-contracted intermittent fever, the paroxysms of which considerably intensified the bleeding. Neither ergotine nor hot injections, bromide of potassium, &c., produced any relief this time. Being at a loss what to do under these most critical circumstances, Dr. Osherovsky resorted to an injection of 1 drachm of Chéron's solution of sodic salts, without expecting any benefit from it. To his

great and agreeable surprise, however, on the next day the bleeding strikingly diminished. In 5 days or so the daily amount of the blood lost fell to 2 or 3 tablespoonfuls. And after another injection metrorrhagia ceased altogether, and did not return up to the date of the communication (written about 3 months after the second injection). The author strongly advises that a fair trial should be given to so simple a method of treatment of these cases, which but too often exhaust both the patience and the resources of the practitioner. V. IDELSON, M.D.

ANATOMY.

RECENT PAPERS.

50. MAYOR.—On Involution of the Uterus (Étude Histologique sur l'Involution Utérine). (*Arch. de Phys. Norm. et Path.*, s. iii., t. x., No. 8, p. 560.)

51. EBERSTALLER.—On the Anatomy of the Island of Reil (Zur Anatomie und Morphologie der Insula Reilli). (*Anat. Anzeig.*, Jahrg. ii., No. 24, s. 739.)

52. SPRONCK.—On the Lateral Tuberosity of the Fifth Metatarsal (Auftreten der ganzen Tuberositas (lateralis) des Os metatarsale und als ein für sich bestehendes am Metatarsale und Cuboides artikulierendes Skelett-Element). (*Anat. Anzeig.*, Jahrg. ii., No. 24, s. 734.)

53. SHUFELDT, R. W.—On Indian Crania (Comparative Data from 2,000 Indian Crania in the United States Army Medical Museum). (*Journal of Anat. and Phys.*, vol. xxii., part ii., p. 191.)

54. HOWDEN, R., M.B.—On the Hippocampus Major (Variations in the Hippocampus Major and Eminentia Articularis in the Human Brain. (*Journal of Anat. and Phys.*, vol. xxii., part ii., p. 283.)

55. WINDLE, B. C. A., M.A., M.D.—On the Circle of Willis (On the Arteries forming the Circle of Willis). (*Journal of Anat. and Phys.*, vol. xxii., part ii., p. 289.)

56. HEPBURN, P., M.B.—On a Needle in the Spinal Canal (a Needle in the Spinal Canal transfixing the Roots of Spinal Nerves). (*Proc. Anat. Soc. of Great Britain, Journal of Anat. and Phys.*, vol. xxii., part ii., p. 8.)

57. STRUTHERS.—On Rider's Bone. (*Proc. Anat. Soc. of Great Britain, Journal of Anat. and Phys.*, vol. xxii., part ii., p. 11.)

ART. 50. *Mayor on Involution of the Uterus.*—The specimens examined were taken from women dead at the 7th month of pregnancy, at term, and at various dates up to nine months after delivery, and the results obtained were as follows :—Immediately after delivery the rapid decrease in size of the uterus leads to a remarkable change in the epithelial cells of the peritoneum. In the longitudinal folds they are thickened, and the nucleus appears surrounded with a mass of protoplasm, whilst at the lowest part of each recess they assume a spherical shape. The fatty degeneration of the muscular fibres is much more marked than Ch. Robin thought, though not so much as Hesch believes. It does not seem, as the latter author considers, to lead to the destruction of the muscular elements. Parallel with the appearance and the development of fat amongst the muscular fibres (from the 15th to the 40th day), fat is to be found in considerable quantity in the cellular elements of the uterine connective tissue. Besides the vascular changes described by Friedländer, the author lays stress upon the fact that at the commencement of the second month after delivery there occurs in all the tunics of the blood-vessels, but especially in the adventitia, a new formation of elastic fibres. These fibres persist for a very long time after delivery. At the 24th day after delivery the author finds no glands at the site of the placenta. The mucous membrane, although reconstituted at the second month, is then only sparely occupied by glands which are less regularly arranged and of more considerable calibre than in the normal condition

51. *Eberstaller on the Anatomy of the Island of Reil.*—The following are the author's conclusions :—1. The insula is not formed so simply as is generally supposed, but falls into an insula anterior, and an insula posterior. 2. This separation is produced by a constant fissure. 3. The description of gyri breves is suitable only for the convolutions of the anterior insula which converge to the pole of the insula ; the hinder insula is better described as the gyrus longus insulæ. 4. The basis of the anterior insula corresponds in its whole extent to the frontal lobe ; that of the hinder, on the contrary, to the posterior central convolutions. 5. The transverse convolutions on the upper surface of the temporal lobe, passing into the Sylvian fissure in the higher primates and man, are not equivalent to the temporo-parietal gyri of other gyrencephalous mammals, but the gyrus longus insulæ takes their place.

52. *Spronck on the Lateral Tuberosity of the Fifth Metatarsal.*—Wenzel Gruber first drew attention to the fact that in subjects before puberty an epiphysis was often to be found in the outer portion of the fifth metatarsal, though the tuberosity, as a whole, was very seldom developed as an epiphysis. Of this last form Gruber described seven cases. In this paper Spronck describes a case of polydactylism, in a full-term female infant. On the ulnar side of the middle of the basal phalanx of the little finger of each hand was a supernumerary two-membered finger. On each foot were seven toes, each foot having five metatarsals, the first and fifth carrying two toes. Those connected with the fifth toes were fully isolated, the first and the supernumerary by it were intimately associated. The tuberosity of the right metatarsal was represented by a fully isolated cartilaginous element. On its inner side were two facets, which articulated with the fibular border of the cuboid and the fifth metatarsal. On the left side the cartilaginous tuberosity was united to the proximal extremity of the fifth metatarsal.

53. *Shufeldt on Indian Crania.*—The following deductions are drawn from the 2,000 crania belonging to 84 North American tribes :—1. The average cranial capacity of the males is greater than the average cranial capacity of the females, and the females show a lower cranial capacity than is attained by the males. This law applies to the individual with equal truth ; but, on the other hand, we find that in certain tribes the average cranial capacity of the females may be greater than that of the males of the same tribe. 2. The average circumference of the cranium in the males is greater than in the females, but the lowest average cranial circumference is attained by the males in one tribe. The greatest cranial circumference was found to have been attained in a male Indian skull, the least in that of a female. 3. The average facial angle in the males and females is equal, as also the greatest male and female angles. The least average angle of the males was less than that of the females. The smallest facial angle was found in a male. In the same tribe the average facial angle of the females may be greater than that of the males. 4. The average length of the cranium is slightly greater in the

females than in the males, but the least average length of the cranium is somewhat greater in the males than in the females. The longest and shortest skulls were both male. In the same tribe the greatest average cranial length is always in the favour of the males. 5. The average male height of cranium is greater than the female. The least average height existed in a series of male skulls. In the same tribe the average height may be greater in the males or the females. 6. The average zygomatic diameter of the male crania was greater than the female, and the least average diameter was found in a series of female crania. The greatest diameter was in a female, the least in a male. 7. The average male breadth is greater than the female. The skull of the least breadth was male, as also the broadest.

54. *Howden on the Hippocampus Major.*—In this paper the author gives the result of his observations on the chief varieties observable in the hippocampus major and eminentia collateralis, as also the relation of the latter to the sulcus collateralis. A well-marked hippocampus minor, he states, is often associated with a small eminentia collateralis.

55. *Windle on the Circle of Willis.*—This paper gives the results obtained from the examination of 200 brains. In 119 the circle was formed in the normal manner. In respect to the posterior communicating arteries it was found that the right was absent in 9 instances, the left in 13, and both in 3. In 28 cases the right was much larger than the left, in 15 the left than the right. Thus, on the whole, the blood supply of the right side is more complete than the left. A median anterior cerebral artery was observed in 9 instances.

56. *Hepburn on a Needle in the Spinal Canal.*—The needle pierced the right ligamentum subflavum between the 4th and 5th lumbar vertebræ. The nerves involved, partly by impalement, partly by matting together by dense lymph, were the 4th and 5th lumbar, 1st, 2nd, 3rd, and 4th sacral-anterior, and the posterior part of the 1st lumbar in part and the 3rd lumbar. The muscles on the affected side were not atrophied when compared with those on the other.

57. *Struthers on Rider's Bone.*—The specimens were from a man aged 35. They were 1¼ in. long and ¾ to 1 in. thick. The R. articulated with pubes. L. was attached to it. The man had been a foot soldier for 21 years, but there was no evidence as to his having been a rider.

BERTRAM C. A. WINDLE, M.D.

PATHOLOGY.

RECENT PAPERS.

58. CORNIL AND TERRILLON.—On Salpingitis and Ovaritis (Anatomie et Physiologie Pathologiques de la Salpingite et de l'Ovarite). (*Arch. de Phys. Norm. et Path.*, s. iii., t. x., No. 8, p. 529.)

59. HEUSSEN.—On Hypophysis Tumours (Ein Beitrag zur Casuistik der Hypophysistumouren). Virchow's *Archiv*, Band cx., Heft 1, s. 9.)

60. GRAWITZ.—On Cadaverin (Ueber die Bedeutung des Cadaverins (L. Brieger) für das Entstehen von Eiterung). (Virchow's *Archiv*, Band cx., Heft 1, s. 1.)

61. WESTPHALEN.—On Multiple Fibromata of the Skin and the Nerves (Multiple Fibrome der Haut und der Nerven und Uebergang in Sarcom und mit Metastasenbildung). (Virchow's *Archiv*, Band cx., Heft 1, s. 29.)

62. BIZZOZERO AND VASSALE.—On the Growth and Regeneration of Gland-cells (Ueber die Erzeugung und die physiologische Regeneration der Drüsenzel en bei den Säugethieren). (Virchow's *Archiv*, Band clx., Heft 1, s. 155.)

63. MONOD AND ARTHAUD.—On the Alterations of the Ectopic Testicle (Contribution à l'Étude des Altérations du Testicule Ectopique et de leurs Conséquences (Infécondité). (*Arch. Gén. de Méd.*, December 1887.)

64. TIZZONI.—Researches on the Physio-Pathology of the Suprarenal Capsules. (*Gazz. degli Ospitali*, Nov. 13, 1887.)

ART. 58. *Cornil and Terrillon on Salpingitis and Ovaritis.*—The authors preface their remarks by the observation that the frequency of operations for removal of diseased uterine appendages, advised and carried out by Lawson Tait and other surgeons, give opportunities for the examination of these cases which were never attainable when they were met with only at autopsies. *Normal Anatomy.*—The mucous membrane of the tube is, as is well known, longitudinally folded and covered with villosities. These differ according to the part of the tube examined. In the neighbourhood of the uterus, and in the first-third of the canal the folds are less marked, and the villosities almost absent. In the second-third both develop and become still more marked at the outer extremity. In old women the tube is smaller and the folds and villosities are less marked. *Pathological Anatomy of Salpingitis.*—In inflammation of the tube there is an increase in the size and number of the villosities, together with a thickening of the wall. The causes which produce this, together with the nature of the exudation, serve to determine the varieties of the inflammation which with their peculiarities are as follows :—(1) *Salpingite Catarrhale Végétante.*—The tube is hypertrophied, irregularly swollen from the size of the little finger to that of the thumb or more, united intimately to the ovary by filamentous adhesions. Sometimes the fimbriæ are visible, congested, and hypertrophied ; sometimes they are confused with the false membranes which cover the ovary and the tube. The abdominal orifice of the tube is always obliterated. The ovary generally presents larger or smaller Graafian follicles or hæmorrhagic cysts or large corpora lutea. The surface of the tube is grey or reddish-grey, more or less congested. The cavity of the tube is filled with irregular, soft, grey vegetations, and with a mucous liquid. Microscopic examination shows great proliferation of the villi, which are all covered by a continuous layer of cells of cylindrical ciliated epithelium. The fibro-muscular coat of the tube is not very materially thickened. (2) *Salpingite Purulente.*—This form differs from the preceding because the tube is distended by pus. It is often accompanied by purulent cysts of the ovary, and is generally a symmetrical affection. Microscopic examination shows no micro-organisms in the pus. The villi are much thicker than in the catarrhal form, their connective tissue being infiltrated by a considerable quantity of round cells. They are all covered by a layer of cylindrical cells, less elongated than in the normal condition, and often provided with cilia. In chronic cases of this form the fibro-muscular coat is notably thickened. (3) *Salpingite hémorrhagique.*—This is an accident which may occur in various conditions. In this case the wall is manifestly thinned. The villi are very small in comparison with those of the last two

forms. They are covered with normal or flattened epithelial cells. (4) *Salpingite Blennorrhagique.*—In the case described the two tubes were filled and distended by a muco-purulent fluid consisting almost entirely of detached cylindrical cells, which had undergone mucous degeneration in many cases. Besides these there were leucocytes; no microbes could be found. The villi were well developed, but very small and extremely vascular, covered with a layer of long cylindrical cells, provided with cilia, desquamated in places, accumulated in masses in the depths of the folds. As the tubes were removed at a *post-mortem* it is possible that this desquamation was due to a cadaveric change. (5) *Salpingite Tuberculeuse.*—In the majority of cases of tuberculosis of the tube, which are found at autopsies, the tube is dilated more or less irregularly, and voluminous. Its peritoneal surface shows tubercular granulations. The wall is thickened, and has foci of caseous infiltration; the interior of the tube is dilated and filled with caseous pus. Microscopic examination shows a thickening of the wall, and much hypertrophied ramifying villi, in the interior of which are often found considerable giant-cells. The free surfaces of the villi were covered almost everywhere with ciliary cylindrical cells. There were patches of desquamation. *Lesions of the Ovaries.*—In all the cases examined, cavities were found which answered to Graafian follicles. The only lesion which was ordinarily observed was cirrhotic induration, generally affecting the surface of the organ. In pyosalpinx, purulent infiltration of the ovarian tissue is common. *Pathological Physiology.*—The greater part of these affections have been preceded by some uterine disease or accident. The affections of the peritoneum are secondary, and cause the formation of adhesions, the obliteration of the opening of the tube, &c.

59. *Heussen on Hypophysis Tumours.*—The author describes a case of a malignant tumour, a lymphosarcoma, which took origin in the anterior lobe of the hypophysis. His paper contains a tabulated list of twenty cases of tumours of this body.

60. *Grawitz on Cadaverin.*—The practical conclusion of this paper is that cadaverin, a decomposition product of frequent occurrence when it is met with in the tissues, can cause inflammation and the formation of pus. This confirms the old surgical idea, that the decomposition of the wound-secretion produces diseases of the wound. The further spreading of phlegmonous, erysipelatous, and emphysematous inflammation is brought about by specific bacteria.

61. *Westphalen on Multiple Fibromata of the Skin and the Nerves.*—This paper narrates a case of multiple fibromata of the skin and nerves, which, having become sarcomatous, gave rise to metastases throughout the body.

62. *Bizzozero and Vassale on the Growth and Regeneration of Gland-cells.*—After describing their methods of observation, the authors proceed to give the results of their examination of various glands. The animals on which the observations have been made were cats, dogs, and guinea-pigs. As a result of their work the authors come to the conclusion that the secreting glands may be divided into two groups. In the former the regeneration of the cells is very active; in the latter it occurs only in a small degree, or not at all. It is, however, to be remarked that this distinction cannot be drawn sharply, as, looked at from this point of view, some of them are connecting forms between the two groups. Further, one gland, the mamma, belongs at times to both groups, the first during pregnancy, the second at other times. To the first group belong the sebaceous glands, the mucus-secreting pits of the stomachic mucous membrane, Galeatti's intestinal glands, and those of the uterus; the remainder belong to the second. The glands of the first group have, in opposition to those of the second, the common feature that in them the gland-cells are little differentiated, and preserve the character of the superficial epithelium from which they are derived. On account of this, perhaps also, they possess with other characters the active potentiality of increase through karyokinesis. In the sebaceous glands this is quite easy to be seen. A young cell passes from the periphery nearer and nearer towards the centre of the alveolus, enlarges and develops in its protoplasm drops of a fatty substance, which, as sebum, it pours into the duct. The question arises in connection with the mucus-secreting epithelium, when the cell has discharged the drop of mucus which it has formed in its interior, does it then die and become eliminated, or does it remain in its position and form new mucus? The results which the study of karyokinesis give support the second hypothesis. In the other glands the differentiation of the secreting cells is still more considerable, and leads to the origination of two different structures, the true gland-cells and the duct-cells. Side by side with this the complication of the gland increases, and in connection with this is the lessening of karyokinesis and an increase of stability in the secreting cells. Karyokinesis is met with very sparely or not at all in the prostate, pancreas, salivary, mucous and sweat-glands, liver, kidneys, and lachrymal glands. With regard to the mamma, the following facts are remarked:—(1) The active growth of the organ, which takes place during each pregnancy, occurs through an active, indirect process of division in the epithelium of the alveoli and the ducts. (2) During lactation no sign of direct or indirect division of the glandular epithelium is present, so that the production of milk must be independent of any destruction of the cells or nuclei. The peculiar spheres which Nissen has described in the epithelium and the lumen of the alveoli do not come from a transformation of the nucleus, and are not necessary for the formation of milk, since they may fail in actively secreting glands. (3) In the gland during involution after lactation large contractile cells, which may be considered as true one-celled absorption organs, assist in the action. The infrequency of occurrence, or the want of karyokinesis in the mucous glands when full grown, even after a period of active secretion, leads to the conclusion that there is no destruction of the functional elements in them.

63. *Monod and Arthaud on the Alterations of the Ectopic Testicle.*—The observations of the authors on the condition of misplaced testicles are thus summarised:—1. The ectopic testicle in almost every case undergoes a marked atrophy. 2. This atrophy takes place in accordance with a regular rule; at the commencement the secretion is still normal, and may so remain for a long time, the testicle being scarcely altered and the spermatogenesis hardly diminished. 3. Under the influence of injuries or the progress of age a fibrous induration of the corpus Highmorianum takes place which acts as an obstacle to the discharge of the secretion and causes infecundity, although spermatogenesis may not be suspended or suppressed in the gland

itself. 4. Finally, in a third period, systematic sclerosis of the parenchyma takes place after a manner which reminds the observer of that of the senile testicle. BERTRAM C. A. WINDLE, M.D.

64. *Tizzoni on Researches on the Physio-Pathology of the Suprarenal Capsules.*—Tizzoni (*Congresso Medico di Pavia*) describes his process of extirpating the gland. Rabbits were the animals experimented on. After the operation the animal seems well; there is no rise of temperature nor diminution of weight; neither the red corpuscles nor the colouring matter of the blood are diminished. In rabbits not albinos there was evident pigmentation of the oral cavity and of the nose; in albinos this did not occur. This abnormal pigmentation appeared even when one capsule only was extirpated. On *post-mortem* examination in some animals no trace was found of the capsule removed except slight thickening of the connective tissue of the parietes of the vena cava at the point where the capsule was attached, *i.e.* on the right side. In other cases there was a regeneration of the extirpated part. The suprarenal capsules may be reproduced, and this not necessarily *in situ*, but in a point removed from that from which the capsule was removed. The matrix from which the new organ arises is the great sympathetic. The suprarenal capsule therefore belongs to the nerve-system of organic life. In some animals operated on, alterations were found in the central nervous system, especially in the bulb, brain, and cerebellum. These alterations have a descending path, and consist principally in an infiltration of white corpuscles in the pia mater, and in a fibrinous exudation in the sub-arachnoid spaces. There is also an active neo-production in the ventricles, forming a villosity filling their cavities. In the white nerve-substance there is a destruction of small round cells. These alterations take place in the most vascular parts of the nervous system, and extend principally along the vessels from which they probably take origin. He believes removal of the suprarenal capsules produces alterations of the blood-vessels of the central nervous system, the altered blood-vessels allowing their contents to escape. He holds that the alterations are to be attributed, not to a trophic, but rather to a vascular action.

G. D'ARCY ADAMS, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

65. VON HIPPEL.—A Further Communication on Transplantation of the Cornea. (*Bericht über der Ophthal. Gesellschaft, Heidelberg*, 1887.)

66. HIRSCHBERG. — On Retro-bulbar Neuritis. (*Centralbl. für Prakt. Augenheilk.*, November 1887.)

67. SHISHKIN, DR. G. I.—A Case of Double Cataract from Lightning-stroke. (*Proceedings of the Caucasian Medical Society*, No. 10, 1887, p. 324.)

68. REICH, DR. MIKHAÏL J.—On Cataracts from Lightning-stroke. (*Proceedings of the Caucasian Medical Society*, No. 10, 1887, p. 326.)

ART. 65. *Von Hippel.—A Further Communication on Transplantation of the Cornea.*—Nothing perhaps more strikingly emphasises the limitation of our art than the fact that complete loss of vision is often caused in an otherwise healthy eye by an opacity of the cornea. This membrane is not more than a millimètre thick, and yet hitherto no efficient means have been found of clearing it when it is the seat of a dense opacity. The opaque portion has been scraped away, and when friction has been employed during the healing process the resulting scar has sometimes been less dense than that removed. Applications of various kinds have been made to the surface, and substances have been injected beneath the conjunctiva; for each method successes have been claimed, but no sooner is any one of them applied to a large number of cases, and by others than its introducer, than its inefficiency in the cases in which it is most wanted is demonstrated. In these circumstances it was natural that the attention of surgeons should be directed to the possibility of replacing the opaque cornea by one transplanted from an animal. This has been done in a variety of ways, but till recently the results have differed from those obtained by other methods, only by failure having followed in every case. Last year, however, Hippel adopted a new mode of performing the operation and met with some success. We commented on this proceeding at the time (LONDON MEDICAL RECORD, Dec. 15, 1886), but another communication from the same writer, and the importance of the subject induces us to return to it. From the result of experiments, and the manner in which other operators have failed, Hippel believes that failure arises from the elasticity of Descemet's membrane, causing it to peal off the implanted portion of cornea, and also off the cornea of the recipient round the margin of the gap, thus opening up the interlamellar spaces and allowing the aqueous to enter. He therefore removes with a trephine as much of the thickness of the cornea as is possible without injuring Descemet's membrane, a proceeding we should imagine not free from difficulty, and then fills the gap with the whole thickness of a rabbit's cornea removed with the same trephine, so that the two membranes of Descemet are in contact. He considers it essential to success that the walls of the pit made by removing the portion of cornea should be absolutely vertical; a trephine therefore constructed on the principle of Bowman's is unsuitable, both because the cutting edge is formed at the expense of the outer surface, and also because it is almost impossible by rotation between the thumb and finger to get a movement that is absolutely regular, and a very little irregularity of the wound may interfere with the healing process by necessitating the throwing off of small particles of contused cornea. Hippel uses a trephine having a diameter of 4 millimètres, whose external surface is straight, the cutting edge being formed at the expense of the inner surface. The rotation is produced by clockwork, which can be stopped in a moment without removing the trephine from the cornea. The case first operated on was a girl of 17, and vision was improved from fingers at two mètres with dilated pupil, to 20-200ths and 6 J. with natural pupil. As the result has been maintained for a year and nine months, it may fairly be considered to be permanent. During this time the transplanted portion has undergone no visible change; it is bounded by a fine grey line, over which the epithelium is continuous. By ordinary daylight the cornea looks almost perfectly transparent, but by focal illumination and artificial light it gives a marked greyish reflex. This is due, the writer thinks, not to impaired transparency, but to a

difference in the refraction between the implanted rabbit's cornea and the original membrane of Descemet, causing a good deal of the light to be reflected. Three months before the reading of his second paper, Hippel operated on a woman aged 50, the centre of whose cornea was occupied by a dense leucoma, 6 millimètres in diameter, which appeared to extend to the deepest layers, and was traversed by several vessels. The periphery of the cornea was clear. Vision, fingers at 3 mètres. The piece of rabbit's cornea was not transplanted until the rather obstinate hæmorrhage had ceased. As the transplanted piece was being lightly pressed into the gap, the bleeding re-commenced; it was therefore removed and lay on the eye for a quarter of an hour, until, the bleeding having ceased, it was replaced. During the first four days there was moderate injection, and the cornea became very hazy for a zone two millimètres wide round the implanted piece; the latter remained clear, but beneath it could be seen numerous fine vessels. In ten days, however, the eye was free from all irritation and the bandage was discontinued. The vessels in the deepest part of the cornea remained visible for six weeks. Vision improved gradually, and seven weeks after the operation it was 1-10th. In the third month after the operation the patient, while harvesting in very hot weather, was attacked by a keratitis, which caused some opacity of the transplanted portion, and at the date of publication the inflammation had not subsided. Whether the vitality of the transplanted cornea will be sufficient to resist an inflammatory process only time can show; but this case establishes beyond question the fact that transplantation of the cornea may be performed successfully in a patient past middle life, and under conditions which one would expect to be very inimical to the vitality of the transplanted membrane, a result which is sufficiently encouraging to justify a renewal of attempts which have been almost universally abandoned.

66. *Hirschberg on Retro-bulbar Neuritis.*—Under the title 'Selbständige Sehnerventzündung,' the writer describes some interesting examples of an affection to which a variety of names have been given, but which in this country is usually spoken of as 'retro-bulbar neuritis.' These cases are characterised by great, often total, loss of vision in the affected eye, which comes on very rapidly, and the pupil of the affected eye acts only in association with that of the other eye. Improvement, sometimes going on to complete recovery, generally ensues, and is often first indicated by the return of the pupillary reaction. As soon as there is perception of light, a large central defect is found in the visual field, which gradually diminishes in size. When the vision is at its worst there are no ophthalmoscopic changes, but during the later stages the signs of optic neuritis make their appearance, and even in the cases of complete recovery some whiteness of the disc usually remains. The first case is that of a boy aged 15, who stated that the vision of the right eye had recently suddenly failed. As the eye squinted and was hypermetropic to 5·5 D., it was at first doubted whether the failure was really recent, but the ultimate result showed that the patient's statement was correct. When seen, fingers could only be counted at 12 inches. The visual field, normal in extent, contained a central defect, extending laterally 20° to either side of the fixation point, 15° above it, and 10° below it. Pupil acted only consensually. The disc margins were slightly blurred, but not more than is common in young hypermetropic eyes. The globe was somewhat tender on pressure. Treated with iodide of potassium and salicylate of soda. The progress of the case showed three well-marked stages; the first was characterised by great impairment of vision and but little ophthalmoscopic change. In the second stage, which had commenced on the sixth day from the first visit, there was improvement in the vision to fingers at 10 ft. and Sn. 12 at 4 inches, but there were inflammatory changes in the disc—a fine striated appearance which blurred its margins, except the outer quadrant, which was natural, as was also the portion of fundus corresponding to it; everywhere else were minute brilliant white dots lying apparently in the superficial layer of the retina. The central scotoma now measured about 20° in all directions. During this stage, which lasted about two months, vision gradually improved to 15-70ths and 3·5 Sn., while the scotoma diminished; but there was no change in the ophthalmoscopic appearances. The third stage was characterised by clearing up of the inflammatory appearances, improvement of vision to 15-20ths, and great diminution in the size of the scotoma, but permanent pallor of the disc. Three other cases are given. One was a woman, aged 42, who suffered from chronic rheumatism. She noticed one morning that the right eye was blind; when seen two days later it had somewhat improved, and vision was 15-200 and 13 Sn. at 8 ins. There was a central defect in the field varying in extent from 5-20°. There was retinal swelling round the disc. On the sixth day the scotoma in the right eye had diminished, the left was painful on movement or pressure. There was distinct papillitis. Vision 15-100ths, Sn. 3 at 8 ins., central defect of field. Treated with potassium iodide. Two days later scotoma in right diminished to 2°·5. Vision 30-50. Left 15-23rds without central defect. Five days later no scotoma in right, and a week after this vision 15-20ths and Sn. 1·5. M. B., woman, aged 28, stated that three weeks before she had suffered from a transient impairment of vision of the right eye, but for last eight days had had defective vision in the left eye, accompanied by headache, which had also shifted from the right to the left side. For some time the eyes had been painful on movement. Right eye, except for astigmatism, normal, with error corrected 15-70ths, but doubtful, as patient was illiterate. Left counts fingers at 4 ft. VF. normal in extent, but containing a central defect having a radius of 20°. Fundus of each eye normal. Under potassium iodide, and later salicylate of soda rapid improvement. On the thirty-second day fingers at 7 ft., V. 15-100ths, and scotoma much smaller. Three months after this complained of pain over right brow, and increasing impairment of vision. Tenderness of lower margin of right orbit. Vision of right fingers at length of room (length not given); left 15-70ths and central defect. The right (recently affected) eye, no ophthalmoscopic changes; the left, on contrary, showed marked pallor. Right improved to 15-50ths. The third case was that of a girl of 17, apparently in perfect health. The vision of the left eye became impaired eight days before her visit, and the defect increased. When seen there was no p. l., the pupil acted only consensually, but the ophthalmoscopic appearances were normal. The artificial leech was applied, and the following day the pupil acted, and fingers could be counted with difficulty at 1 ft. The vision steadily improved, but the signs of

optic neuritis appeared, and there was a large central scotoma. Five weeks after the attack the vision was normal. Six years later the right eye suffered a similar attack, which was accompanied by tenderness on pressure. Both discs were a little paler than normal (the patient was not anæmic). Under pilocarpine-diaphoresis there was immediate and progressive improvement, with a gradually diminishing central scotoma. And four weeks after the commencement of the attack recovery was complete. Another case which is not yet completed is briefly mentioned. A man, aged 37, had had pains in right side of head several months. Then loss of sensation on right side of face followed in a few days by a central scotoma in right eye, which in a few days became totally blind. Ophthalmoscopic appearances normal; the eye slightly prominent, and its movements, especially outwards, somewhat limited. At the date of publication the action of pupil was re-established and some vision had returned under treatment with mercury. The writer considers that the three stages described in the first case are always well marked, and that the improvement in the vision in the above cases was independent of the treatment employed. The pathology of these cases is at present exceedingly obscure. We would advise those interested to read Professor Hock's paper in the *Centralblatt* for 1884, and Mr. Nettleship's in *Transactions of the Ophthalmological Society* for the same year. If we are to accept Hirschberg's statement in regard to the existence of three well-marked stages, a good many of the cases given by Mr. Nettleship would have to be placed in a separate category. Pain in the head and tenderness in or around the eye, increased by movement, appear to have been very frequent concomitants or premonitory symptoms. W. ADAMS FROST.

67. *Shishkin on a Case of Double Cataract from Lightning-stroke.*—Dr. G. I. Shishkin, of Kütaïs, details (*Proceedings of the Caucasian Medical Society*, No. 10, 1887, p. 324) the case of a previously healthy and well-developed Cossack boy, aged 11, who, when standing under a tree, was struck senseless by lightning. Some passers-by at once resuscitated him by means of burying him in the earth, with subsequent energetic massage. According to his statements, he did not see the flash, nor hear the report, but when he recovered his senses he found himself to be absolutely blind, having formerly always had an excellent sight. When, six days later, he was brought to the Pseküpsky hospital and placed under the care of Dr. Jdanoff, the boy complained of constant pain in his head, arms, and legs, as well as in the burned regions. On the anterior surface of his body there was seen a red, partially blistered streak, of about two or three fingers' breadth, which commenced at the upper edge of the sternum and descended straight down to the navel, at which it gave off a short oblique branch to the right, then crossed, also obliquely, the left side of the abdomen and the left groin to pass along the inner surface of the thigh, and soon disappeared on the leg. His eyelids were greatly swollen and closed, and the eyelashes singed. On separating the eyelids, Dr. Jdanoff found a diffuse opacity of the lens on both sides. The patient was totally blind (could not tell where the windows were). The burns soon healed, and all pains disappeared. On inspecting the boy about six weeks after the accident, Dr. Shishkin found that his vision had improved so far as to enable him to make out a lighted candle at the distance of about 20 feet, but he was still unable to count his fingers. On both sides, in an equal measure, in the lens there was detected a bluish-white opaque star, composed of fairly broad radii, with narrow and relatively less turbid sections between them. The same picture was obtained on a side-illumination by means of a double convex glass. The ocular fundus could not be seen through the opaque lens. The conjunctivæ, corneæ, pupils, and movements of the eyeballs were quite normal in all regards. Dr. Shishkin thinks that the development of the cataract in this case must be attributed to a disturbance set by electricity in the trophic nerves of the lens, and not to any traumatic effect of the lightning-stroke, since the anatomic integrity of all visible ocular structures had remained intact. [Dr. Leber's case of double cataract from lightning-stroke may be found in the LONDON MEDICAL RECORD, August 1883, p. 341.—*Rep.*]

68. *Reich on Cataracts from Lightning-stroke.* According to one of the most eminent and erudite Russian ophthalmologists, viz., Dr. Mikhaïl J. Reich, of Tiflis (*Proceedings of the Caucasian Medical Society*, No. 10, 1887, p. 326), international literature contains not more than 25 cases of various ocular disturbances caused by lightning-stroke. In 15 of the number there were observed optic neuritis, atrophy of the optic nerve, paralyses of the ocular muscles, and rupture of the choroid coat. In the remaining ten cataract was found. As a rule, the lesion had the shape of pointed and streaky turbidities of the anterior and posterior cortical layers of the crystalline body, and of its capsule. In an interesting case, recently published by Dr. Silex, and referring to a boy, the cataract consisted of 15 delicate, fine, greyish streaks, forming a star under the capsule. The chief interest in Silex's case lies in the fact that the turbidity disappeared spontaneously six days after the accident. The development of the opacities in question is usually explained by a catalytic action of electricity, which gives rise to coagulation of the proteid masses present between the capsule and the epithelial covering of the lens, as well as between the fibres of the latter. A rapid disappearance of lenticular opacity in Silex's case may be ascribed to the re-dissolution of proteid clots in the alkaline fluid of ocular tissues. [Dr. Leber, however, thinks that the coagulation is not brought about by any catalytic action of the electric spark, but simply by an instantaneous rise of the temperature of the parts up to a high level, caused by the lightning.—*Rep.*]

V. IDELSON, M.D.

REVIEWS.

ARTICLE 69.

The Private Treatment of the Insane as Single Patients. By EDWARD EAST, M.R.C.S., L.S.A. London: J. & A. Churchill.

THIS little work commences by allusion to the three modes of treating an insane patient—at home, in the house of a medical man, or in an asylum.

First, with regard to treatment in the patient's own home, Mr. East says, as a rule, it will fail because the patient has been accustomed to command and do as he pleases. There are difficulties in the way of enforcing the taking of food and exercise, and the interference of relations unsettles the attendants.

Unless the patient is so clear to make his (or her) confinement to one room necessary, or the case is of such a nature as to permit the institution of treatment without opposition, it is generally best to allow the patient to be removed from the home circle to the care of a medical man or in charge of trained attendants. Mr. East says this can be done at an expense of from £1 to £10 a week, or even more (reviewer has known it cost £40 a week).

Mr. East treads on dangerous ground when he informs his readers (p. 6) that there is no necessity for either order or certificates, whether the patient is treated in his own home or anywhere out of it, so long as there is no question of 'profit' from the boarding and lodging. He says the control must be efficient. If so, this efficiency must be paid for. Dr. Blandford tells us, in his learned work, that anyone deriving profit, whether as proprietor of the house or lodging, or as companion, nurse, or attendant, must comply with the statutes, unless, indeed, it be in the case of a person found lunatic by inquisition, whose committee may take charge of him or commit him to the charge of another without medical certificates, upon his (the committee's) own order.

But, adds Mr. East, if a place of treatment is fixed upon, where money is to be paid, it is best to obtain the order and medical certificates before the patient is removed from home.

We question Mr. East's reasons for preferring the private method (*i.e.* as single patients) *versus* asylums. His arguments may be summed up shortly. First, greater secrecy; secondly, more rapid recovery; thirdly, more medical attention in a private house than in a large institution.

With regard to secrecy the patient, if in good health, must walk somewhere, and in a good airy court or private garden he is much less likely to be seen by his friends than if sent out into the streets with his 'keeper,' as the public choose to call an attendant. With regard to more rapid recovery, statistics have certainly shown a larger percentage of recoveries from asylums than from private houses. With regard to more medical attention, we can agree in some cases only. In others, as, for instance, where there is any uterine complication or similarly delicate condition of the patient, a medical man would think twice before examining anyone residing under his own roof, whereas if the patient were in a public asylum there would be no hesitation about performing a necessary duty.

Mr. East wisely alludes to the question of expense, which really is at the bottom of the whole matter, and recommends one of the hospitals for the insane if the means of the patient are not sufficient to allow of his being placed under private care or in an asylum; but we can scarcely agree with the statement (p. 9) that there is little difference between the cost of these two last-named modes. The truth is, it depends on the nature of the case, and the nature of the patient's surroundings. If there be excitement, refusal of food, homicidal, suicidal, noisy, destructive, mischievous, or intolerably objectionable tendencies in the patient, if the house in which he resides be in a street in town, if the relations are pig-headed and prejudiced, if there be not proper medical aid at hand, and if the patients means be not ample, removal is indicated.

If the contrary conditions exist, and if the relatives are willing for the time being to turn the patient's house into an asylum, to refuse admission to all visitors, to hire extra servants to wait upon the attendants, to feed both sets of domestics like fighting-cocks day and night, to be constantly on the *qui vive* for new symptoms, if they are content to put up with the wear and tear and strain of having a lunatic in the house, by all means avoid asylums, both private and public, and keep your patient at home.

The mistake usually made by the public is to think that all cases are exactly the same, whereas there is as much difference between a typical acute, and a typical chronic case as there is between black and white.

An acute case, to be treated properly at home, requires four or five attendants, whose salaries are not less than two guineas a week apiece, exclusive of board, lodging, washing and cab fares.

A chronic case may live with a friend, a relative, a doctor, or even one trustworthy attendant; may enjoy almost as much liberty as a sane man; may visit theatres, picture galleries, or go excursions into the surrounding country.

Mr. East's chapter on attendants is the best in the volume, and he here gives a practical hint which is worth remembering. Sick nurses may be employed in cases confined to their beds, and at a much less cost than trained mental attendants. He thinks well of lady nurses, but is rather hard on the 'broken-down' gentlemen, who he thinks will fail in attendance on the insane as they have failed in some other pursuit or occupation. He prefers to train a bright intelligent country lad with good health and spirits to obtaining his attendants from the institutions. This idea was probably obtained from the late Dr. Newington or from Dr. Monro.

It is pleasing to find Mr. East saying that it is often a difficult matter to decide whether delusions should be simply ignored, allowed, or combated. This sums up the whole question of the moral treatment of delusions very fairly, that is, whether the statement of a delusion is to be met by acquiescence, denial, or silence. Of course this depends upon the period at which the delusion is brought out. A dangerous patient in the early stage of acute mania must be agreed with. Later on, as the storm clears off, the delusion may be met with silence, or a gesture of surprise, and, as convalescence approaches, it may be encountered by a point-blank denial or argument.

Mr. East's remarks on food, feeding, sleep, tact, and legal requirements, and his appendices will all prove of much service to those who have neither the time nor inclination to study more voluminous works on these subjects. The book will undoubtedly be of much service to the public and the general practitioner. HENRY SUTHERLAND, M.D.

ARTICLE 70.

The Physiological Effects of Artificial Sleep, with some Notes on the Treatment by Suggestion. By Dr. MATHIAS ROTH. London: Baillière. 1887.

IT is principally from France that additions come to our knowledge of hypnotism. Dr. Stille-Ihlienworth, writing in the *Irrenfreund* (Nos. iv. and v., 1887), suggests that this is because the French, from their nervous temperament, are more easily brought into the hypnotic state. Nevertheless, people equally susceptible are also met with in our islands, and if one-tenth of the harvest of information be real, it is a pity that our countrymen do not share in the gain. Of the hypnotisers it may indeed be said they discover rather too much.

When we give the experimenter a draft on our belief, he adds so many figures to the sum that we stop it in a panic. It is not enough for example that the hypnotised subject can smell substances which no one in his ordinary moments could notice, or that he can see reflections on a cardboard as clearly as an ordinary mortal can see them in a mirror; but he is influenced by the mere proximity of drugs. Opium placed near such susceptible persons caused sleep; so did chloral; and each caused its own kind of sleep.

MM. Bourru and Burot had valerian and cantharides in separate bottles. One of them wishing to induce the action of the latter drug brought the bottle near to the hypnotised patient, but found to his surprise that an exciting effect was produced. On looking more carefully at the bottle he perceived that it was the valerian instead of the cantharides that he had brought near. In a similar way we are told that apomorphine and ipecacuanha caused vomiting by being merely brought near the patient, especially near the head, and different kinds of alcoholic liquors being held near these too susceptible patients caused their own kind of intoxication; wine held near them causing merriment, brandy furious intoxication, absinthe failure in the legs, &c. Then we are told that when a hypnotised person is ordered to do something some hours after awaking he executes the command at the time appointed without looking at the clock and without remembering the circumstances under which the order was given. When we have consented to believe so much we are somewhat staggered by being told that a hypnotised person has executed such a command on a given day and hour six months or more after, without in the meantime consulting the almanac or counting the days. In fact, unless hypnotisers do not become more wary in capping one another's performances, it will require a serious accumulation of evidence before their pretensions are received without distrust. The fact seems to be that a good hypnotiser can make the hypnotised person adopt, assert, and act upon any idea that he suggests, whether by words, signs, or actions, and the most valued media are those who are quickest at catching or guessing the ideas or objects of the hypnotiser. It has been a reproach to us that although we cited and criticised the observations of hypnotisers we never make any original observations. The reason is that the reviewer cannot feel sure that in hypnotising patients we are not exposing them to an injurious affection of the nervous system, and that there are none under his care whom he would so treat. Nevertheless, when others have arrived at the belief that such fears are groundless, or have patients of a different kind, we are always pleased to read their observations. Nothing promises more in diseases of the nervous system than the further pursuit of experiments in hypnotism, and it is much to be regretted that medical superintendents of asylums in our islands are so slow to make experiments on this interesting subject; in fact, we can only recall one experiment in an English asylum—that performed by Dr. Huggard, who hypnotised a patient troubled with melancholia and infused into her mind cheerful ideas which after awaking continued to cheer her. There is no doubt that insane patients are very difficult to hypnotise.

In France Dr. Voisin has repeatedly treated mania and hallucinations by repeated hypnotisings, and Dr. Forel, of Zurich, becoming interested in the subject, went to Nancy to witness the experiments of Dr. Bernheim, which he was thus rendered able to confirm, and add some of his own (*see* Erlenmeyer's, *Centralblatt für Nervenheilkunde*, September 1887). Dr. Bernheim has published seventy-one cases of cure through hypnotic suggestion, and in the *Revue de l'Hypnotisme*, published in Paris, Bérillon gives a record of the different diseases successfully treated in that way. Prominent amongst these are neuralgia, amenorrhœa, and incontinence of urine, and similar functional disorders. Perhaps the most noteworthy claim of these experimenters is the influence which commands given in the hypnotic state have upon the future conduct. A rough patient was induced to behave in a polite and kindly manner to her sister after awaking. A lazy child was thus induced to learn his lesson, so that he became the first in his class. 'These fits of industry,' Dr. Mathias Roth tells us, 'lasted for some time, when the child fell back into his lazy state and afterwards objected to be again hypnotised.' Dipsomaniacs were strengthened in their resolution to abstain from drink. In short, if this goes on, as it is to be hoped it will do, the hypnotiser will exert a very powerful moral force over many members of the community. Clergymen, instead of sending their congregation to sleep, will learn to hypnotise them, and then infuse moral and religious ideas into their passive minds. On the other hand, it is admitted by these experts that commands to do immoral actions issued in the hypnotic state have been executed under an irresistible impulse during the waking condition. Then again, the passive state to which the hypnotised is reduced may render the person a victim in the hands of the hypnotiser.

Both Braid and Bérillon have stated that the violation of a woman in the hypnotic state is impossible, as such an attempt would instantly cause her to awake. But there are at least five cases on record where the hypnotised person had to regret betrayed confidence. We find it stated in Dr. Roth's pamphlet that a young nurse during the hypnotic state was ordered to take a fancy to the attendant of a dissecting room. When she awoke she began to cry, and refused to give the cause of her grief. On being very much pressed she said that she was, by some irresistible impulse, compelled to like the attendant, although she felt he was both dirty and disgusting.

It may be here mentioned that although many of those who experiment on hypnotism attributed most of the results to the action of suggestion upon a person retaining the consciousness of the present, but deprived of memory and of will-power as in the ordinary condition of dreaming, there are still survivors of the old school of Mesmer who believe in a magnetic fluid existing in the human body which may be made to radiate from one person to another, causing mesmeric results, which are not to be explained by simple suggestion. The *Journal du Magnétisme*, founded in 1845, also published in Paris, advocates the views of this section who deal more largely with the wonderful.

Those of our readers who are disposed to experiment will find some practical directions in the pamphlet of Dr. Mathias Roth, which is written, as he tells us, with the sole purpose of rousing the interest of his younger colleagues in a branch of the healing art which he expects will contribute to the cure of many diseases hitherto unsuccessfully treated by other methods.

In some parts of his pamphlet Dr. Roth seems to

be too easy of belief, but the public has reason to be grateful to him for introducing many new ideas to British medicine; such as the movement-cure and the gymnastic system of Ling.

Dr. Stille-Ihlienworth thus gives Charcot's method of hypnotising. He first excites the expectation that something important is going to happen, then he causes an assistant to shut the eye of the person to be hypnotised, and holds before the other eye, and a little above it, a pencil or some similar object, and causes him to stare at it, which causes a rapid exhaustion of the retina. Or the patient is made to look at a finger held below the point of vision. In this way the hypnotic state is induced in a few seconds. If he does not succeed in three minutes he regards the patient as not susceptible, and makes use of some other remedy.

W. W. IRELAND, M.D.

ARTICLE 71.

De l'État de la Dentition chez les Enfants Idiots et Arriérés. Contribution à l'Étude des Dégénérescences dans l'Espèce Humaine. Par ALICE SOLLIER, *née* MATHIEU-DUBOIS. Paris. 1887.

IT frequently happens that the author of a book makes an apology in the preface for having dared to publish it. It does not seem out of place that an apology should be made for 180 pages upon the mouth and palate in idiots. The authoress pleads that the subject has been very imperfectly treated by previous writers. In this charge she does injustice even to her own countrymen. The only English writer she refers to is Dr. Langdon Down, whom she accuses of inconsistency in first affirming that the abnormal appearance of the teeth in idiots had none of the characters of teeth affected by syphilis, and then stating the contrary ten years afterwards. There is some misunderstanding here. We are quite sure that Dr. Down never confounded the appearance of the teeth in idiots with what has been called Hutchinson's teeth. No one acquainted with the matter could do so. She then quotes the essay of Clawe Show (Dr. Clay Shaw), who denied that there was any connection between the shape of the palate and teeth and deficiency in the mental faculties. This puts out of court any pretensions of British pathologists to acquaintance with the subject. Dr. Alice Sollier then winds up by quoting a single German author, Wildermuth, in the *Würtemberger Correspondenz-Blatt*, as the representative of German science in this department. This is what she calls an *aperçu historique*. It would be wasting time to point out how many writers in Britain and Germany have been passed over. Had the authoress read them all, perhaps the book would never have been attempted; but, since it has been written and published, Dr. Alice Sollier deserves fair consideration for what she has done. She has made and recorded a very careful and exact study of the anomalies in the teeth and mouth in idiots. The book is illustrated with thirty-two woodcuts, most of which are taken from casts of the teeth or palate. The clinical history of one hundred cases is given, with minute description of the state of the mouth. Whether all this is of sufficient interest to justify a book is a matter for the medical public to decide. It appears to us that it would have been better if Dr. Alice Sollier had generalised more, pared off details, and published the result of her researches in a paper of twenty or thirty pages, which would have been readily received into a journal dealing with neurology or psychiatry. One might have expected some comparative observations on the frequency of a narrow or vaulted palate in ordinary people, as well as in the parents and collateral relations of idiots. As far as our own observations go, a high palate is commoner with those born deaf than with normal children. These congenital abnormalities of the teeth and palate are sometimes associated with deformities or inequalities of the base of the skull, especially of the sphenoid bone and basilar process. There is no doubt, however, that the V-shaped, saddle-shaped, or vaulted palate, with accompanying abnormalities of the teeth, may occur with people who have no mental deficiency.

Dr. Alice Sollier gives at the end of the book twenty-five conclusions, the most important of which may be summed up as follows: A defective form of the palate is very common in congenital idiocy, and anomalies in the development and appearance of the teeth are even more so. In about a quarter of the cases observed the dentition was later than usual. In 8 per cent. of the cases it was earlier. The second dentition is generally later. The teeth are sometimes smaller or larger than usual. This accounts for the unusual size in some cases by the fusion of two teeth into one. The teeth of idiots are often placed in an irregular manner, and the front teeth especially are sloped in an abnormal direction. Erosions and longitudinal furrows in the teeth are frequent, and do not seem to be owing to convulsions as Magitot held.

W. W. IRELAND, M.D.

ARTICLE 72.

On the Tapetum Lucidum and the Functions of the Fourth Pair of Nerves. By HENRY LEE. J. & A. Churchill. 1887.

'NO satisfactory account has yet been given of the use of the tapetum lucidum.' Thus commences this strange little pamphlet, and thus might it well have finished. The writer's theory briefly is this—that the tapetum acts as the concave reflector of a bull's-eye lantern, and by concentrating light upon the object looked at enables its possessor to see in a dim light or 'even in the dark.' That the function of the fourth nerve is to cause compression of the globe in its transverse diameter by means of the superior oblique, the antero-posterior diameter being thus lengthened and the mirror focussed upon a near object. Amongst other curious matters we learn that Shakespeare was aware of this property of the tapetum, for in *Julius Cæsar* he makes Casca say—

'Against the Capitol I met a lion,
Who glared upon me.'

A reference to the context would show that Casca was less impressed by the nature of the 'glare,' which he probably did not stay to observe accurately, than by the fact that the lion 'went surly by without annoying me.' Mr. Lee advances in support of his curious idea the fact that the reflex of the tapetum can be seen in the living animal under certain conditions; surely he must be aware that the fundus-reflex of the human eye, when its refraction is hypermetropic, as that of the lower animals is, can be seen under the same conditions.

The writer has sufficient knowledge of optics to see that the light reflected by the tapetum can only have proceeded from the direction of the object

looked at, and in the instances he gives of grazing animals, from the object itself, it is strange that he does not see that this simple fact is fatal to his theory; for if the light from the object has already entered the eye, what could be gained by it being again thrown out of it? Even if the tapetum formed a much more perfect reflecting surface than it does, the amount of light reflected would be insignificant in daylight, in twilight it would be infinitesimal, and in the dark necessarily *nil*. The analogy which Mr. Lee draws between the natural bull's eye and the dark lantern which goes by that name seems to us to be perfect in every respect, and, making allowances for the less reflecting power of the organic mirror, its power of illuminating external objects would be that of a policeman's lantern without any light in it. We would commend Mr. Lee's pamphlet to the consideration of the authorities of Scotland Yard.

The writer's theory of the function of the fourth nerve does not lend itself to serious criticism. There is abundant evidence, consisting of facts, and not based upon visionary theories, to show that the whole change in the refraction of the eye in adapting it for near vision takes place by an increase in the convexity of the lens, and the evidence in support of the third nerve being that which regulates the accommodation is as conclusive as that in support of the circulation of the blood.

W. ADAMS FROST.

ARTICLE 73.

Sur un Nouveau Traitement de la Métrite Chronique et en particulier de l'Endométrite. Par Dr. G. APOSTOLI. Paris: Octave Doin, Editeur, 1887.

ALTHOUGH many physicians had tried electricity before Apostoli, to him belongs the credit of placing its application on a more scientific and reliable basis. The first part is devoted to the instruments used, and these are taken in detail. There is no doubt, as he says, that the introduction of the galvanometer has produced, or rather is now producing, a revolution in electro-therapeutics.

The battery recommended is a Leclanché of from twenty to thirty large elements. The intra-uterine electrodes are described; the necessity for a platinum, gold, or aluminium end with the positive pole is insisted upon. A copper stem gilded answers very well, and is less expensive. Moistened potter's clay spread out in a layer about half an inch thick, wrapped in tarlatan, and measuring 9 inches by 12, is used for the external pole. The objects gained by this are two—a large surface of skin is covered, and so there is less concentration of the current and less pain; secondly, the clay will adapt itself to any shaped abdomen, and so perfect contact is obtained over the whole area. It is, however, very messy, and is rather troublesome to keep moist. Unless the surface of the abdomen is very irregular, other materials answer just as well. The current strength recommended is from 100 to 250 ma. Patients vary in their capability of standing strong currents. The condition of the tissues also makes a difference. Any local inflammatory action appears to cause tenderness. The number of applications varies according to the social position of the patient. If able to rest in bed it may be done twice a week, otherwise once a week, or every ten days is sufficient. Full details on every point are given. It yet remains to be seen whether this method of treatment for chronic metritis and endometritis possesses advantages over other and simpler and more easily applied methods.

J. INGLIS PARSONS, M.D.

ARTICLE 74.

The Treatment of Uterine Fibroids by Electrolysis. By W. E. STEAVENSON, M.D. J. & A. Churchill. 1887.

THIS little pamphlet contains a short description of Apostoli's method of applying electricity to uterine fibromata, with remarks by the author. There are also a few suggestions that will prove useful. Stohrer's battery is recommended as being the most suitable, and to our mind it is also the most convenient. Two galvanometers are mentioned, Gaiffe's and Stohrer's. We have found the former, which is recommended by Apostoli, to be sometimes inaccurate. The latter has an advantage because it can be used to register currents of higher intensity, up to as much as 1,000 milliampères.

J. INGLIS PARSONS, M.D.

ARTICLE 75.

Dental Caries and its Prevention. By HENRY SEWILL, M.R.C.S., and L.D.S., Eng. 2nd Ed. London: Baillière, Tindal, & Cox. 1888.

THIS little book contains papers on the etiology, pathology, and prevention of dental caries, which were originally published in the Journal of the British Dental Association. Mr. Sewill combats the idea that the dental tissues themselves take on any action in the production of caries, believing it to be largely due to the solvent action of acids, chiefly malic, butyric, and acetic, which have been generated by fermentation going on in the mouth.

Bacteria have been demonstrated in the dentinal tubules of carious teeth, but the exact part which they play in the disease is somewhat doubtful. The chief predisposing causes are: (1) innate structural defects in the teeth. (2) All such diseases as are accompanied by vitiation of the oral secretions, or which tend to the formation of deposit of acid, and the accumulation of products of decomposition in the mouth. (3) Crowding and irregularity of the teeth due to smallness and malformation of the maxillæ.

The last Chapter, which treats of the prevention of dental caries, is likely to be especially valuable, but the whole work will well repay the study of those interested in the subject with which it deals.

BERTRAM C. A. WINDLE, M.D.

NOTES ON BOOKS.

ARTICLE 76.

A Physiological Basis for an Improved Cardiac Pathology. By T. WESLEY MILLS, M.A., M.D. Reprint from *New York Medical Record*, Oct. 22, 1887.

PROFESSOR MILLS believes that the usual explanations of pathological conditions of the heart are too mechanical. His own views on the subject are founded on clinical, pathological, and physiological, or rather biological data, and are the result of his study *inter alia* of the hearts of the water-tortoise and other animals. Writers on cardiac diseases, he says, have been accustomed to lay great stress on sexual excess as a causative factor in various affections, including the so-called irritable heart; and

many writers are of opinion that 'heart strain' is a real cause of break-down in athletes. His own opinion on these points is thus given :—'In every living organism there is a possible maximum of vital force. In organisms with a nervous system there is a certain similar maximum of available nervous energy, the amount depending on the condition of the animal at the time, just as with a Daniell's cell there is only so much electricity generated, even when in the best possible condition, which may be very much less if the conditions of the battery's action are not perfect. If a portion of this electric force be diverted along one conductor, there is so much less left for other possible channels ; thus it is with the nervous system.' This view he proceeds to develop by means of various cases and observations. After considering the questions—(1) as to which nerves constitute the channels by which nervous forces reach the heart and affect that organ ; and (2) what the manifestations of such influence really are, he summarises his views as to why and how the heart happens to beat at all thus—

1. The factors entering into the causation of the heart-beat of all vertebrates as yet examined are—(*a*) a tendency to spontaneous contraction of the muscle-cells composing the heart ; (*b*) intra-cardiac pressure ; (*c*) condition of nutrition as determined directly by the blood, and indirectly by the nervous supply of the organ.

2. The tendency to spontaneous contraction of muscle-cells is most marked in the oldest parts of the heart ancestrally considered. The author has shown (*Journal of Anatomy and Physiology*, vol. xxi.) that in the sea-turtle the last segments of the ventricle to pulsate are on its extreme right, while the right auricle outlasts the left, and the sinus and great veins beat much longer still. The same has been noticed in several other groups of animals. The most recently acquired parts of the heart always are the first to lose functional activity. These are but extensions of Harvey's observations seen in the light of evolution.

3. In all hearts examined, intra-cardiac pressure is a factor of considerable importance ; in some, as that of the fish, menobranchus, &c., it is apparently the controlling factor. The same may be said of the molluscan heart.

4. The power which one contracting cell, when in action, seems to possess of initiating a similar state in others is of great significance.

5. The influence of the nerves of the heart appear more and more as we ascend the animal scale. They seem only indirectly concerned in the causation of the beat by their influence over nutritive processes ; but, as the heart is being so frequently modified in its action, their influence in highly developed hearts becomes an almost constant factor, and of a degree of importance which our knowledge of the relation of nerve to muscle enables us but inadequately to appreciate, but which the pathological changes ensuing on nerve-section illustrate.

6. It almost follows from the above that, one part of the heart having contracted, the other parts must follow. This is probably the explanation of the rapid onset of the ventricular after the auricular systole in the mammal. It will be remembered, too, that, even in the mammal, contraction begins in the great veins entering the heart.

The basis of all these explanations is found, in reality, in the *natural contractility of protoplasm.* A heart in its most developed condition still retains, so to speak, the inherited but modified amœba in its every cell. BERTRAM C. A. WINDLE, M.D.

ARTICLE 77.

Headaches in Children. By W. H. DAY, M.D. J. & A. Churchill. 1887.

THIS pamphlet is a reprint of a paper read at the International Medical Congress in Washington, and deals more particularly with headaches in their relation to mental training. That the affection is very common in school-children, Dr. Day shows by quoting the statement of Professor Bystroff who examined over 7,000 children in St. Petersburg schools, and found headache in 11·6 per cent.

Headaches are brought on in children by deficient ventilation in the schoolrooms, by overtaxing the mental energies (more particularly in children of delicate build, or in those who are underfed), and by defective vision. There are also neuralgic and other headaches. In his remarks on treatment the author lays great stress upon the necessity of children having at least nine hours' sleep a day.

The pamphlet forms a practical *résumé* of the whole subject, and, as such, will repay perusal, more especially by those who are in medical charge of schools, but there is nothing very original about it.

RALPH W. LEFTWICH, M.D.

ARTICLE 78.

Transactions of the Association of American Physicians. Second Session. Philadelphia. 1887.

THIS nicely printed volume contains the papers read before the Association at the meetings held June 2 and 3, 1887. Among them are several by well-known practitioners and of general interest, for example one on two cases of hepatic cirrhosis in children by Dr. Howard, Professor of Medicine at Montreal, followed by a long discussion. A short paper on 'Methods of Research in Medical Literature,' by Dr. Billings, would seem to have been written for the purpose of informing the medical public that there are several physicians in Washington who are willing to 'look up records of cases and operations and prepare statistics' at the very moderate remuneration of a dollar an hour. Dr. Wood contributes a few remarks on the antipyretic treatment of fever, and Dr. Minot reports a number of cases in support of the employment of antipyrin in typhoid fever as compared to thallin. An interesting discussion took place on the subject, as to the merits of which much difference of opinion evidently exists. Dr. Hun, of the Albany Medical College, contributes a number of cases of sewer-gas poisoning, with remarks thereon, which are well worthy of perusal. Dr. Bruen reports a series of observations on the treatment of phthisis by that now almost obsolete treatment of gaseous injections *per rectum*, which he claims lessened the cough and expectoration and caused the disappearance of the phthisical signs. In the discussion which followed, the opinions expressed coincided mostly with those of the writer of the paper. The papers by Dr. Atkinson on certain forms of typhoid fever simulating remittent malarial fever, and by Dr. Putnam on chronic lead-poisoning, are also of interest. ALFRED S. GUBB.

Medical Science is the name of a new monthly journal published in Toronto, the first number of which has made its appearance. This makes the eighth medical journal published in Canada.

MISCELLANY.

ANTIPYRIN IN SEA-SICKNESS.—Dr. Eugene Dupuy has employed antipyrin in eleven cases of sea-sickness with invariable success. Dr. Dupuy considers that sea-sickness arises from disturbance in the medulla oblongata (vomiting, alteration of the respiratory rhythm, &c.). One gramme of antipyrin in a wineglassful of water is administered three times a day, before meals, two or three days before a sea voyage. The dose is continued the first day or two after starting. Four or six grammes of antipyrin in twenty-four hours may be given without any inconvenient results.

M. DASTRE has invented a cannula with ramming-stock, to be employed in the operation of gastric fistula on animals, which he showed at a recent meeting of the Biological Society. M. Dastre observes that hitherto, before operating, Claude Bernard and other physiologists usually gave the animal a copious meal of meat and bones, so as to distend the stomach. But this has the inconvenience of rendering the application of anæsthesia impossible, and also of causing the issue into the middle of the wound of a mass of alimentary matter that sullies it and hinders cicatrisation. In order to avoid this, and at the same time to distend the stomach, in which condition only it is possible to obtain active gastric juice, M. Dastre operates upon a dog with an empty stomach, and, after having sent the animal to sleep (with atropomorphine and chloroform), he distends the stomach by means of a bladder of gutter-percha fixed to the end of a gastric sound. The bladder, introduced empty, is inflated through the tube, and disinflated at the end of the operation. The cannula invented by M. Dastre is provided with a ramming-stock, the interior extremity of which, in the form of a cork, effectually prevents the entry into and obstruction of the cannula by matter contained in the stomach, but allows the gastric juice to escape. To the outer extremity of the stock is screwed a mushroom-shaped cover, which gives no hold to the teeth of the animal, should it endeavour to tear away the apparatus.

Mr. ROBERT LOUIS STEVENSON has paid a graceful tribute of appreciation and gratitude to the medical profession in the dedication of his recent volumes of poems, *Underwoods*. He writes:—'There are men and classes of men that stand above the common herd: the soldier, the sailor, and the shepherd not unfrequently; the artist rarely; rarelier still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilisation; and when that stage of man is done with, and only to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practise an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Heraclean cheerfulness and courage. So that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing.' In these days of ignorant detraction of the medical practitioner, to whose services be it noted every one is glad to have recourse in time of need, it is pleasant to have such testimony from such a man. A chronic invalid, Mr. Stevenson sets forth in this way his gratitude to the many doctors in many lands who have helped him in a long struggle against an hereditary foe.

PROPOSED LARYNGOLOGICAL SOCIETY.—The *British Medical Journal* is informed that a new society is in course of organisation as a sequel to the resolution passed by the sub-section of Laryngology and Rhinology at the Dublin meeting of the British Medical Association. The Chairman, Dr. W. McNeill Whistler, in his opening address on that occasion, dwelt strongly on the advantages that such a society would afford to workers in these special branches, who at present have no means of bringing their results to the test of direct criticism by competent judges, except at the annual meetings of the Association. It was decided that immediate steps should be taken to carry Dr. Whistler's suggestion into effect, and to Dr. R. A. Hayes, of Dublin, the able secretary of the sub-section, was entrusted the duty of making the necessary arrangements. His efforts have been so successful that the list of original members already comprises about fifty names, which include those of nearly all the prominent laryngologists in the three kingdoms. The following gentlemen, among others, have signified their intention of joining the society:—Sir Morell Mackenzie, Dr. Whipham, Dr. E. Woakes, Dr. Prosser James, Dr. A. Orwin, Dr. Coleman Jewell, Dr. Greville Macdonald, Dr. Dundas Grant, and Messrs. Lennox Browne, Carmalt Jones, George Stoker, W. R. H. Stewart, and Percy Jakins, of London; Mr. C. Warden, of Birmingham; Dr. Ward Cousins, of Portsmouth; Mr. Cresswell Baber, of Brighton; Dr. P. McBride and Dr. G. Hunter Mackenzie, of Edinburgh; Dr. T. Barr, of Glasgow; Dr. Philip Smyly, and Messrs. Kendal Franks, Thornley Stoker, and J. B. Storey, of Dublin; Dr. Walton Browne, of Belfast; and Dr. A. Sandford, of Cork.

SALICYLIC COLLODIUM AS A REMEDY FOR CORNS.—Gezow's salicylic collodium (a 10 per cent. solution of salicylic acid in collodium, with addition of extract of Indian hemp for preventing pain and inflammation) has of late become an almost domestic remedy for corns in Germany, Austria, Switzerland, and certain parts of Russia, where it is sold without any medical prescription, since the preparation is regarded as a harmless one. Recently, however, Mr. E. Kampe published (*Pharmaceutische Rundschau*, 1887, No. 15) a case in which paintings with the collodium had given rise to alarming toxic symptoms apparently attributed by the writer to salicylic acid. Referring to his case, Mr. Kampe insisted on prohibition of a free sale of the remedy. In the *Farmatzevtitchesky Jürnal*, No. 19, 1887, p. 293, Mr. Ivan Binert, an apothecary of St. Petersburg, states that he also saw a similar case of a dangerous action of the collodium, but he did not hesitate a moment to ascribe the effects to extract of cannabis. Since the latter ingredient is quite superfluous, the essential curative agent being solely salicylic acid, Mr. Binert ceased henceforward to introduce the extract into the mixture and began to prepare the collodium after following formula which he warmly recommends for universal adoption. ℞ collodii, 100 parts; acidi salicylici crystall., 10 pp.; terebinthinæ Venetæ, 1 p.; chlorophylli (for colouring purposes), q.s. M. Having sold several thousand bottles of the compound, he has never yet heard any complaints either of its ineffectiveness, or of any unpleasant accessory effects, such as pain, inflammation, or toxic action. In its present form the collodium is said to be absolutely innocuous, while, on the other hand, it forms an excellent anti-corn remedy which surpasses Unna's taffetas as well as the numberless remedies of the class.

THE CHAMBERLAND FILTER.—M. Fernet recently stated that four cases of typhoid fever had occurred at the Hôtel Dieu within two or three weeks. A fifth case subsequently appeared. The patient was a nurse employed in the lying-in ward. The Hôtel Dieu is well supplied with Vanne water, which is perfectly safe for potable purposes. There is also a supply of Seine water laid on for cleaning purposes, &c. The taps which furnish the two kinds of water are next to each other. M. Fernet learned from a hospital attendant that he and some of his companions were in the habit of drinking Seine water in preference to that of the Vanne. The filter through which the Seine water passes previous to entering the taps filters the water, but does not retain the pathogenic germs it may contain. M. Labbé proposes that a Chamberland filter should be placed in each ward for the purpose of averting such danger. M. Terrier employs these filters at the Hôpital Bichat, in order that the water he uses for dressings may be perfectly free from any germs.

The London Medical Recorder.

Article 79.

THE TREATMENT OF EXTRA-UTERINE GESTATION.

If one were guided by what is to be found in the text-books of gynæcology, it would be supposed that the difficulty of dealing with the condition of ectopic pregnancy lay rather in the treatment than in the diagnosis, the latter being based apparently on the recognition of certain quasi-pathognomonic signs and symptoms. It will be a shock to practitioners who have not already had the fact brought home to them by inglorious experience that, as a matter of fact, the diagnosis of an uninflamed and non-ruptured extra-uterine fœtation during the early months is difficult and even impracticable. Symptoms of a kind to excite suspicion are often entirely wanting, and, if present, are likely to be attributed to other and far commoner pelvic diseases. Mr. Tait stated the other day that in all his experience he had only seen one such case prior to rupture, and then he had signally failed to arrive at a correct diagnosis. Of course gynæcologists do, now and again, make a correct guess—for it is little more—and find their forecasts justified by the results of operative interference, but, short of the fœtal heart, it seems pretty certain that no means are available for detecting the existence of extra-uterine pregnancy with assurance.

We will, however, assume for the moment that, though difficult, the diagnosis is practicable, and that brings us to the question of treatment. As treatment has for its object to prevent the otherwise inevitable rupture of the sac, it may be well, in the first instance, to inquire into the circumstances which determine this disastrous occurrence. Now we have it on the authority of several eminent gynæcologists that when operative interference is rendered necessary by rupture of the sac before the fourth or fifth month, the fœtus is generally macerated, and it is therefore inferred that the death of the fœtus preceded the rupture. When, in the course of a normal pregnancy, the fœtus dies, expulsive efforts, as a rule, soon follow, and, assuming an analogous condition of things to apply to the Fallopian tubes, the muscular coats of which undergo considerable development when they contain a fœtus, it is not unreasonable to suppose that the death of the fœtus in ectopic pregnancy is, in many cases, the proximate cause of the rupture. Expulsive efforts are made, and as the contents of the tube cannot pass into the uterus, the coats yield, and rupture takes place. This has an extremely important bearing, for, if the inference be correct, the treatment usually advocated of arresting the growth of the fœtus by killing it, is about as wrong as it could be. Further, it is by no means certain that by killing the fœtus we arrest the growth of the placenta, which may go on growing, and has done so in a certain number of cases, as the specimens show.

The recently introduced method of destroying the fœtus by the passage of an electric current, is then open to a variety of criticisms. Its advocates claim to have been successful, in upwards of twenty cases, in arresting growth and averting serious consequences. They urge that objections based upon the probable result of killing the fœtus, and the continued and unhindered growth of the placenta, are idle, inasmuch as no such complications have ever caused them to regret their interference. Here, however, the question of diagnosis comes in, and they are told that their immunity from any of these sequelæ has been due simply to the fact that no reliable evidence is forthcoming of the cases having been really cases of extra-uterine fœtation, and, as we have already observed, since no evidence short of the fœtal heart-sounds can be accepted as conclusive, the success of the treatment remains open to question.

What, then, is the proper and rational treatment of these cases in the eyes of those who condemn early intervention on both diagnostic and technical grounds? Mr. Tait says that the life of the child is an element which ought to command attention. As you are unable to diagnose the condition in its initial stage, he says, let it alone until you can—that is, until the fœtal heart places your diagnosis beyond question. But then more than ever the murder of the child would be inadmissible, for its death would in all probability subject the mother to an additional danger, and one life would be destroyed without any corresponding benefit for the other. Once the fœtal heart-sounds have been detected, then the best course is to leave matters severely alone, enjoining only on the patient certain precautions as to the avoidance of exertion, &c. Should rupture occur, or at any moment that may be deemed most conducive to the interests of both mother and child, laparotomy may be performed, and the lives of both in the majority of cases preserved. The logic of these arguments is irrefragable, but, inasmuch as sundry of the premises are, after all, matters of conjecture, it would be becoming to show some reserve before accepting the conclusions.

Alfred S. Gubb.

Article 80.

ROSENTHAL ON CUCAINE.

In his eighth paper on Cucaine in the *Wien. Med. Wochensch.* Prof. M. Rosenthal, of Vienna, gives his experimental and clinical experiences of the effects of this drug. The experiments were made on curarised dogs, a 1 per cent. cucaine solution being injected into the external jugular vein. The blood-pressure was measured not only in the arteries but also in the veins (at the axillary), and observations were taken of the effect on the cardiac muscle of larger doses of cucaine and of other drugs combined with it. Injection of small quantities of cucaine (0·01 gramme) caused a considerable increase of arterial blood-pressure and a quickening of the pulse, but the pressure in the veins was not materially altered. Stronger doses (·04–·05 gramme) were followed by a rapid sinking of arterial pressure, and the venous pressure was often negative. In such cases no increase of pressure was produced by injection of strychnia. Retardation of the pulse from cucaine injection is generally accompanied by increased venous pressure. The same is the case when stronger cucaine doses produce a falling off of arterial pressure. From this it is clear that the two pressures are not parallel. If the pressure was only moderately reduced by cucaine, an injection of strychnia at once caused an increase, the vascular

pressure being in proportion to the quantity injected. Injection of large doses of cucaine (0·1 to 0·15 gramme) occasioned a rapid collapse of both pressures, and cardiac paralysis ensued, nor could strong strychnia injections then save the heart. This shows the dangerous nature of cucaine as a cardiac poison, when given in large doses. These experiments also explain many symptoms of nervous diseases and other organic affections. To begin with the assuaging effects of increased arterial pressure produced by the methodical use of cucaine on nervous symptoms. First and foremost there is the depressive form of neurasthenia, with its concomitants—pains in the back and head, mental depression, disturbances of sleep and digestion, periodical nervousness, paleness, small pulse and lassitude. Here increasing doses of cucaine (0·02 to 0·03 gramme), taken twice daily for weeks, materially allayed the abnormal impressionableness. On some patients it had the cheering effect of champagne. General appearance, pulse, arterial tension in the radialis and bodily activity were all improved, as well as the mental faculties. Still more striking were the effects in three cases of tabes dorsalis, in which particularly the violent shooting neuralgic pains were alleviated by cucaine. A syringeful of 3 per cent. cucaine solution having been injected as soon as the neuralgic hyperæsthesia began, the body grew warm within a quarter of an hour, the circumscribed hyperæsthesia disappeared, and the skin began to perspire. The radial pulse became fuller and tenser, and in half an hour or an hour the patients could leave their beds. This rapid general improvement is of the greatest interest, contrasting strongly in this respect with the effects of morphia, napellin, and antipyrin, which leave a long general depression. But cucaine has also its drawbacks when continued for a long time. To produce a sedative effect a very concentrated solution (up to 5 per cent.) must be injected, a little glycerine being added to prolong its duration. And after repeated injections there is a disagreeable sensation in the stomach and aversion to food. However, these unpleasant sensations may be avoided by swallowing a mouthful of brandy immediately after the injection. In chronic diseases complicated with dropsy, Rosenthal has seen the œdemata yield to an injection of 0·03 gramme of cucaine, but only transitorily ; for as soon as the injections were intermitted dropsy again set in. The diuresis in such cases may be referrable to increase of intrarenal blood-pressure and of the action of the heart. Anæsthesia produced by cucaine may extend either to the centre or periphery. In bulimia (hyperorexia) from hyperæsthesia of the gastric vagus-centres, doses of from 0·01 to 0·02 gramme, two or three times daily, act strikingly, but they require to be taken for a length of time ; and afterwards occasionally repeated. For nervous cardialgia a teaspoonful of 0·15 to 0·02 cucaine in 150 parts of water, given every quarter of an hour at the beginning of the attack, is of great service. Rosenthal thinks that the recently confirmed proof of disease of the vagus nucleus in spinal cardialgia shows that the gastralgia of hysteria and neurasthenia is to be attributed, not to excitement of the termini of the sensory nerves distributed in the stomach, but rather to irritation of the bulbar vagus-centres. Hence the effect of cucaine in such cases. Again, sometimes pain in the stomach after a meal is the result of hyperæsthesia of the peripheral gastric nerves, and here the above dose gives relief. Weiss, of Prague, gave every half hour a small spoonful of 0·15 cucaine in 150 parts of water in bad cases of gravid vomiting with good results. All these facts show that, on the one hand, subcutaneous administration of cucaine may affect the gastric vagus-centres in tabetic pain-crises and produce anorexia and sickness, while, on the other hand, internal doses allay cardialgia and vomiting caused by irritation of the functionally different ganglionic vagus-cells. In other cases, again, abnormal excitableness of the peripheral gastric nerves is alleviated by cucaine. Peripheral colic pains, so common in nervous anæmic individuals and morphinists, yield to the above-mentioned doses. And in hyperæsthesia of the urethra and neck of the bladder from sexual neurasthenia, nervous spermatorrhœa or continued excesses, small careful local injections of a 5 per cent. cucaine solution are to be recommended, facilitating as they do the methodical use of the sound and hydriatic treatment. For tinnitus aurium a dose of quinine or salicin and cucaine in a proportion of 0·01 to 1·0 may be given.

JOHN ELLIOTT.

ARTICLE 81.

ROUX, CHAMBERLAND, AND OTHERS ON IMMUNITY FROM DISEASE BY INOCULATION WITH SOLUBLE SUBSTANCES.*

MM. ROUX and Chamberland are engaged in a series of researches to determine whether immunity from certain diseases may not be guaranteed by introducing soluble substances into the organism without introducing the actual virus of the disease. The first attempt in this direction was made by M. Pasteur, in the case of fowl-cholera. The microbe, placed in chicken-broth, developed during a certain time, but then ceased ; the medium, however, retained sufficient organic substances to nourish other kinds of micro-organisms. The development of the microbe ceased, either because it had exhausted certain substances indispensable to its existence, or because it had produced substances which arrested its development. M. Pasteur concluded that broth in which the cholera microbe had existed, injected into a fowl, would guarantee the bird from contracting the disease. The notion that immunity from a disease may be obtained by inoculation with substances in which the virus has existed, without the introduction of the virus itself, although not actually demonstrated in this instance, was favourably regarded by many biologists. This artificial attenuation of the virus in the case of septicæmia of rabbits has been the object of MM. Roux and Chamberland's researches. MM. Pasteur, Joubert, and Chamberland have called attention to a micro-organism, the germ of which is found in the earth, and in the intestines of sheep, cattle, and horses. This active organism was termed the 'septic vibrion,' because it produces a special kind of septicæmia in guinea-pigs, rabbits, and sheep, rapidly followed by death. MM. Koch and Gaffky described this microbe as the bacillus of malignant œdema. Guinea-pigs inoculated with this microbe present the following phenomena. The hair stands erect ; the animals scream if they are touched, and are attacked with convulsive jerks from time to time. Death occurs within twelve hours. Necropsy

* *Annales de l'Institut*, Paris, December 1887.

reveals sanguinolent œdema in the sub-areolar tissue of the armpits and groin ; the muscles at the spot where the injections have been practised are red ; the intestines are red, the liver is discoloured. The septic vibrion swarms in the œdematised area, the muscle-juice and the peritoneal serosity ; it emits gases which cause the connective tissue in the armpits and groin to yield a crackling sound when pressed.

The microbe develops in veal-broth to which an alkaline substance has been added, in serum, and in nutritive gelatine ; but the cultivation must be protected from the air. In these mediums it produces germs, which, submitted to a temperature of 80° C. (176° F.), die in ten minutes, and in less than five minutes at a temperature of 95° to 100° (203° to 212° F.). By placing the serosity from the œdema, or the blood from the heart of a guinea-pig which has died from septicæmia, in a veal-broth, as above described, a cultivation liberating equal quantities of hydrogen and carbonic acid gas is obtained in twenty-four hours. At the end of three or four days the gases are no longer discharged. The microbes, though very small, cease to develop. The medium retains a certain quantity of nutritive substance. The liquid of the cultivation is no longer capable of nourishing microbes ; if, after being passed through a porcelain filter, some fresh septic vibriones are placed in this liquid, it still remains sterile. If a portion of this liquid is added to some fresh broth, it has the effect of impeding the development of the vibrion. This fact proves that the vibrion produces substances in the medium in which it developed, which act as an antiseptic and arrest its further development.

MM. Roux and Chamberland inoculated some guinea-pigs with sterile cultivation liquid, and by this means the animals were preserved from septicæmia. The following experiment was made amongst others :—

Injections with cultivations of septic vibrion, rendered sterile by exposure to a temperature of 105° C. (221° F.) were made in the peritoneum of some guinea-pigs. The doses increased progressively. Ten, twenty, forty, sixty centimètre cubes were successively employed. Two other guinea-pigs were inoculated twice in two days with 40 cubic centimètres of the same cultivation. Forty-eight hours after the last injection all the guinea-pigs were inoculated under the skin with diluted septic blood. This last operation was repeated on three fresh guinea-pigs, and on the two guinea-pigs which had twice been inoculated through the peritoneum with 40 cubic centimètres of pure broth. The guinea-pigs which were inoculated with the septic blood only succumbed after twelve and sixteen hours respectively ; those inoculated with pure broth died within eighteen hours ; those inoculated with the sterile cultivation died in the following order.

Those to which 20 cubic centimètres were administered died in nineteen hours, 30 cubic centimètres killed the animals in forty-eight hours, and 60 cubic centimètres killed them in 144 hours. The guinea-pig which was inoculated with 40 cubic centimètres was ill, but ultimately recovered, and was completely guaranteed against septicæmia. A small eschar was formed at the spot where the inoculation was made. This eschar disappeared in a few days. The two guinea-pigs which were twice inoculated with 40 cubic centimètres of the cultivation appeared to feel no ill effects. The virus evidently did not develop in this case.

These experiments show that every degree of immunity from septicæmia may be obtained without introducing the actual virus into the organism, and demonstrate the influence exercised by the different cultivation media. The serosity removed from the œdema of a guinea-pig which has succumbed to septicæmia is a more active medium than broth in which the septic vibrion has developed. MM. Roux and Chamberland conclude that, in a given medium, the microbe may produce certain vaccinal substances that it cannot produce in others, and that the conditions under which a cultivation is prepared have an important influence on the substances which are formed in it by the microbe.

The authors believe that a means will be found by which 'chemical vaccine' for recurrent diseases will be obtained. The present method of preventive inoculations has so far proved inefficient, because the microbe which causes a recurrent affection develops indefinitely in the body of an animal. It is unable to produce ptomaïnes (which check its development) with the materials it finds in the organism. In different conditions, this pathogenic microbe might form substances which, inoculated in the organism, would prevent the development of microbes of its own kind or render the organism impervious to their action. It is probable that these substances would be found in cultivations in which the development of the microbe has ceased rapidly.

MM. Chantemesse and Widal lately succeeded in rendering some mice refractory to the action of the typhoid bacillus by inoculating a few cubic centimètres of a cultivation in which typhoid bacilli had been destroyed by the action of heat.

When the active substance of these cultivations can be isolated and prepared in sufficient quantities, it will serve to inoculate human beings who are attacked by typhoid fever. (*See* LONDON MEDICAL RECORD for Oct. 15, 1887, Art. 7372.)

W. VIGNAL.

ARTICLE 82.

CORNIL AND CHANTEMESSE ON THE ETIOLOGY OF CONTAGIOUS PNEUMONIA OF PIGS.*

MM. CORNIL AND CHANTEMESSE have made a series of researches on the etiology of contagious pneumonia in pigs. The authors have arrived at the following results. Contagious pneumonia in pigs is an affection which has been mistaken for measles. It has appeared in France within the last few years. It is contagious ; it terminates by fibrinous peripneumonia, and almost invariably proves fatal. At the outset the animals are weary, and remain lying down ; there is fever, cough, loss of appetite. The skin on the side and stomach presents a reddish hue ; blackish patches, from which the hair is easily detached, appear on the neck. There is fœtid, whitish mucous diarrhœa, which sometimes continues throughout the illness, and at other times is replaced by constipation. The affection lasts from 20 to 30 days. It is distinguished from measles by its duration, by marked pulmonary symptoms, and by the peculiar nature of the micro-organisms which

* *Comptes-rendus de la Société de Biologie*, Dec. 24, 1887.

produce it. This affection destroyed a great number of pigs at the pig-rearing establishment at Gentilly during more than a year. The animals were supposed to have contracted the infection at the market of La Vilette, where animals are sent from all parts of France. MM. Cornil and Chantemesse made the following experiments with fluid removed from the lungs, liver, spleen, and blood of a pig which was put to death while suffering from the affection. The cultivation with the blood and spleen remained sterile. The lung and the liver gave pure cultivations which presented the following characteristics. The cultivation did not liquefy the gelatine; a transparent patch clotted in parts, and thin in others, appeared on the surface. When the colonies were equally distributed they presented the appearance of delicate tracery. On gelose a milky patch with a lace-like border was observed; with potatoes an abundant grey cultivation was obtained. These cultivations contained the same microbe in a pure state—namely, a small oval bacteria measuring 1 μ to 2 μ long, by 0·3 μ wide. It is motionless, aerobic or anaerobic, according to different conditions. A young pig was inoculated with portions of a pure cultivation in some broth with a Pravaz syringe. The next day the animal was much upset; the temperature was 40° C. (104° F.). Diarrhœa subsequently appeared; the animal grew thin; breathing was accelerated. There were crepitating and sub-crepitating râles in the lungs at the spot where the injections were practised. The skin was covered with black patches. The animal succumbed four weeks after the inoculation was made. At the necropsy the right lung was found to be attacked with generalised broncho-pneumonia. There were hepatic lobules in the left lung. The kidneys were affected with nephritis; the urine was albuminous. The large intestine was covered with solid tumours from the size of a lentil to that of a small walnut. Most of the lymphatic ganglia were swollen. The pathogenic microbe was found in the fluid removed from the lungs, ganglia, intestinal tumours, liver, spleen, kidneys, and in the urine, bile, and blood. It was found in large quantities in the fæcal matters.

Similar inoculations were made in the case of some rabbits, guinea-pigs, mice, and pigeons. All these animals, with the exception of the pigeons, died within a few days. The microbe was most abundant in the blood of the mice, in which case it was larger, and, when coloured with methylene-blue, presented a clear space in its centre. It was found in the sanguine plasma and in the white corpuscles.

The lesions above described show that infectious pneumonia in pigs is rather a general infection than a pulmonary infection. The virus usually introduces itself by the respiration; this accounts for the pulmonary symptoms observed; but the disease may be contracted through the digestive tube or a cutaneous wound. MM. Cornil and Chantemesse believe that this affection is analogous to that which has been described in Germany by Loeffler and Schutzas as the 'schweine-seuche,' and in America by Salmon and Smith as the 'swine-plague.'

W. Vignal.

Dr. Murrell's 'Massage as a Mode of Treatment' has been translated into French by Dr. Oscar Jennings, and will shortly be published with a preface by Dr. Dujardin-Beaumetz, of Paris, under the title of 'La Pratique du Massage.'

Article 83.

BURNEY YEO ON THE THERAPEUTICS OF THE URIC ACID DIATHESIS.

In the *Brit. Med. Jour.*, January 1888, pp. 16 and 67, Dr. Burney Yeo considers the appropriate treatment of that constitutional state, and the various maladies associated therewith, which depend on the tendency to the accumulation of uric acid, in excess, in the human organism. The various views which prevail as to the mode of origin of this excess are briefly summarised, and as a basis for therapeutic discussion the author considers that it may be accepted, that the 'uric acid diathesis' is associated with imperfect nutritive metabolism and imperfect excretion of the results of retrograde metamorphosis, especially of albuminous substances. After enumerating the principal morbid conditions dependent on or associated with the uric acid diathesis, Dr. Yeo mentions the principal remedies proposed for affections connected with this diathesis. In treatment, the question of diet and mode of life is of even more importance than medicine. In these matters each person requires a separate study, especially with regard to digestive peculiarities; our object should be to construct a diet which shall be readily digested, and which does not tend to excite acidity and undue fermentation in the alimentary tract. As regards the use of alcoholic drinks, women as a rule should avoid them. Malt liquors and bad wines are most prejudicial in this diathesis; the widely accepted idea that a cheap claret is harmless is a grave fallacy, for these cheap wines are more harmful than a good quality champagne or burgundy. No remedy is more valuable and important than the regular consumption of a considerable quantity of pure and, preferably, hot water. With regard to medicinal agents, Dr. Yeo considers colchicum one of the most valuable, when given judiciously, for most of the morbid manifestations of this diathesis. Salicylates he does not consider of much value, unless the uric acid and rheumatic diathesis are combined.

Garrod advocates the use of the benzoates of sodium and lithium, but some observers doubt their efficacy. In the same way Garrod has found great benefit from guaiacum in chronic articular gout, but little attention has been paid to his recommendation. The value of iodide of potassium is as yet imperfectly understood; it acts most beneficially in chronic arthritic affections, but it has its most important applications in the less easily recognised degenerative changes dependent on this diathesis. If long continued in fairly large doses, this drug has a remarkable influence in retarding the progress of those degenerative vascular changes dependent on the gouty constitution. The use of the various alkalies in these cases is almost universally accepted, but Dr. Yeo does not see why the lithium compounds are superior to those of potash or soda, and considers the diuretic effect of bicarbonate of potash, especially when given with hot water, to be more reliable than any other drug. Closely connected with the use of alkalies is the employment of the various mineral waters. Such a variety of these have been recommended, and their compositions are so varied, that the author thinks the benefit derived from their use depends a great deal on the change of diet and regular living enforced on patients when taking the waters. Purgatives are useful only in so far as they are the means of ensuring the discharge

of excrementitious matters from the system; it is a mistake to drain away the serum of the blood by drastic purgatives after we know the bowels are completely relieved. One of the most complete and satisfactory purgatives in these cases is a pill at night containing half a grain of extract of colchicum and two grains of watery extract of aloes, followed in the morning by a large teaspoonful of Carlsbad salts in a tumblerful of hot water. Diuretics and diaphoretics are useful as stimulants of excretion, and a very hot bran bath is a most useful agent in many cases. Opium should be avoided as much as possible, because of its influence in checking excretions generally. RICHARD NEALE, M.D.

ARTICLE 84.

LEFORT AND VERNEUIL ON THE RADICAL CURE OF HERNIA.

IN a discussion held at the *Société de Chirurgie* of Paris on Nov. 30, 1887, M. Léon Lefort maintained that hernia could not be radically cured by operation. In the majority of cases, he held, the patient is obliged to wear a truss after such treatment; and with regard to the few cases in which there is no need to use a truss, the latest method of operation is of too late a date to enable one to assert that the cure is assured and that relapse will not take place. As most of those who have undergone the operation for the radical cure were hospital patients, it is very difficult to obtain much information as to the results of the treatment after an interval of a few years. In the few instances in which such information has been gained, it was found that the operation had not effected a radical cure. M. Lefort asserts that the difficulty, if not the impossibility, of effecting a radical cure of hernia by operation will be readily understood if the surgeon considers the mechanism of its formation. The peritoneum, previously intact, in a case of acquired hernia becomes extended and is gradually drawn through the inguinal canal which is opened up and dilated, and the surgeon concludes that by making a cicatrix in the sac and by causing inflammatory induration and adhesion of the sub-peritoneal cellular tissue, he can effectually prevent this gliding and extension of the peritoneum, although he may fail to bring closely together by sutures the separated walls of the canal. It is held by Lefort that no one has a right to say that the truss is dangerous, and, particularly, that it is more dangerous than the so-called radical cure. Strangulated hernia is a rare and exceptional affection if the large number of ruptured subjects be considered, and occurs mainly amongst the poor, who are liable either to neglect their condition or to be provided with cheap and ill-fitting trusses. In speaking of the radical cure in cases of congenital hernia, M. Lefort stated that in his opinion an experienced surgeon, provided his patient can come frequently under observation, and can afford to renew the truss from time to time, might and ought to cure every inguinal rupture in subjects under the age of fifteen years. There are, it was allowed, some few exceptional cases in which the radical cure might be tried. When a congenital inguinal hernia is complicated by testicular ectopia, it is sometimes difficult to obtain a truss capable of keeping up the hernia without at the same time exposing the testicle to painful and often dangerous irritation. In such a state of things, and also when the testicle without being irritated by the truss is fixed near the external ring, and is the seat or starting-point of acute pain, an operation for radical cure is indicated, and also, if the condition be unilateral, removal of the undescended testicle. M. Lefort will not admit that an operation for radical cure is indicated in every case of irreducible omental hernia. When the epiplocele is small, when it is not complicated by enterocele, when the patient suffers little if any pain from his rupture, and when it seems very probable that the adherent epiplocele closes the canal, a truss with a concave pad will suffice, and it is not necessary to operate. On the other hand, if the omental mass be large, if it be associated with enterocele, and if the application of a good truss does not prevent pain, and if there be reason to fear that inflammation of the protruded omentum may occur, and lead by the formation of bands to strangulation, an operation may be regarded as justifiable. Although a radical cure might not be thus effected the patient would be much benefited by the conversion of a painful and dangerous hernia into a simple, manageable, and much less dangerous one. An operation for radical cure is indicated also in cases in which there is a tendency for the hernia to slip down behind the truss, and to become irreducible for a time, and sometimes painful and inflamed. In short, M. Lefort, though regarding the so-called radical cure as a palliative rather than a radical measure, would advise it when the truss is incapable of supporting the hernia, and when its use does not remove the risk of attacks more dangerous than the operation.

In some remarks made at the same discussion, M. Verneuil asserted that a complete cure of hernia could not be effected by surgical operation. As after internal urethrotomy it is necessary to pass the sound from time to time to control the inevitable retraction of the cicatrix, so after the operation for radical cure the use of a truss is almost always necessary to prevent return of the hernia through the external ring, which remains enlarged in spite of all the efforts of the surgeon. M. Verneuil approves of the operation, but would not recommend it except in cases of complicated hernia. The operation, it is held, is a serious one, and reference was made to two cases, in one of which it had been followed by acute and fatal delirium tremens, and in the other by a series of morbid conditions which threatened the life of the patient.

W. JOHNSON SMITH.

ARTICLE 85.

VIRCHOW ON THE DIAGNOSIS AND PROGNOSIS OF CARCINOMA.

THE *Wiener Med. Wochensch.*, No. 2, 1888, prints the following from the *Archiv für Pathologische Anatomie, &c.* Of late an old contested point has become prominent, namely, the question whether anatomical or clinical diagnosis is the more trustworthy. Years ago clinical experience was considered to be the foundation for diagnosis and observation of cancerous ulcers generally. Even Johannes Müller, then a leader of thought on the subject, was of this opinion, and consequently reckoned carcinoma fasciculatum among carcinomata, 'although it had not the slightest similarity to either fungus medullaris or common cancer,' because the physiological peculiarities were identical. According to his view 'all tumours might be called

cancerous, which are either originally constitutional or become so in the natural course of their development. The latter having become constitutional, reappear after extirpation and terminate fatally.' Virchow's observation has led him to a different opinion. Having first defined carcinoma generally as an alveolar formation composed of a stroma of connective tissue with cellular contents (*Archiv*, Vol. i., p. 94), he was compelled to admit besides carcinomata other malignant or, to use Müller's expression, cancerous growths. Thus sarcomatous forms were developed from carcinoma fasciculatum and osteoid cancer. This distinction rested on the ground of anatomical discoveries concerning the delicate structure of the tumours. Virchow learnt that there was not a single genus of morbid growth which could claim the character of constant and equal malignity. Not a few carcinomata retain for years the character of local neoplasms; others, again, after remaining for a long time local, become 'constitutional,' whilst some show nearly at once a tendency towards 'generalisation.' But the same is true of sarcomata; and as it is well known that apparently innocent and chiefly local tumours are occasionally metastatic, the question as to the subsequent course, however important it may be for the observation of each single case, has ceased to be regarded as a principle of diagnosis. In 1849 already Virchow pointed this out, and laid stress on the necessity of 'confining the names of different tumours to certain forms of a certain structure to avoid confusion.' As regards malignity, 'it was a question of degree.' Later on he said, 'Malignity runs through a scale of heterologous tumours from one species to another.' Even according to this definition, which has been extensively adopted, there remains a certain connection between diagnosis and prognosis. If 'carcinoma epidermoideale' (cancroid) assumes the lowest degree, and carcinoma the highest degree, of malignity, diagnosis at once yields a considerable amount of prognosis. Many other factors, particularly position, size, and ulceration, will to a great extent determine the prognosis, yet their importance is more of a casuistic nature. The general decision must rest on diagnosis, but the latter cannot be deduced retrogressively from prognosis, but must depend on knowledge of the histological nature of the growth, not so much the classification of the genus as the most exact determination of the species. Morbid growths in this respect resemble plants. It is not enough to say that a plant belongs to the solanaceæ, or that it is a solanum; for its poisonous quality can only be ascertained when we learn what species of solanum we have before us. This is also exactly the case with carcinomata and sarcomata. It may be asked, how is it possible to gain a reliable empirical foundation for the scale of malignity, except by determining the course of the disease? Certainly only copious careful statistics can yield a sure foundation, and such an attempt has been made so to define the biological peculiarities of the growths as to be able to formulate rules. The only question is, how are these observations to be collected? It being a question of vital processes, clinical observation may be regarded as answering the purpose. No doubt; but only after the histological nature of the tumour has been accurately determined. The histological nature of the neoplasm or, in other words, its anatomical structure, may sometimes be determined with a certain amount of probability, nay even certainty, from rough and merely external indication, but in many cases anatomical examination alone can lead to anatomical diagnosis. The pathological anatomist is not confined to clinical observations for his study of the biological peculiarities of the various growths, for *post mortem* examination opens up a wide field of observation. The way in which a tumour spreads, how it affects the adjacent parts, how it attacks distant and deep-lying parts may be ascertained chiefly by pathologico-anatomical examination. Histological inquiry proved that the ordinary carcinoma had a fan-like, alveolar structure, before the microscope played so important a part in histological examination. But now we know by the aid of the microscope that the succus in the alveoli is composed to a great extent of cells. Virchow's share in the further development of the inquiry is, that he proved the alveolar structure to be a characteristic of *all* carcinomata, and further that he demonstrated the agreement of the structure of cancer cells with those of epithelial and epidermoid cells, and particularly the cells of the so-called transition epithelium. If this be correct, two things are required to prove a carcinomatous formation, viz., the presence of alveoli and the filling of these with epithelioid cells. It is clear this can take place only in the interior of the tissue, not on the surface. It may happen, and does not infrequently happen, that portions of the tumour push up above the surface, but it is often very difficult to recognise the real meaning of this. Therefore the practical question to be determined in every diagnosis is, whether the real seat of the neoplasm is just under the surface or quite in the depth of the tissue. This is that heterology of cancer, which Virchow has demonstrated as against former theories.

Cancerous formation begins with the development of epithelium at an improper place; hence the proof of heterotopy is the first step towards diagnosis. But other tumours also (nacreous and dermoid) have heterologous epidermis formation and are yet not cancerous. Further necessary signs are the presence of the alveolar structure, *i.e.* the peculiar stroma, but especially the complete closure of the seeming gland, and absence of an excretory duct. The exact determination of the relation of the underlying parts to the surface is under certain circumstances very difficult, especially when there are special proliferations on the surface as is the case in so-called verruca cancroides, villiform cancer, and tumor cauliflorus. These are apt to monopolise the attention for a long time. An important question, hitherto but little discussed, is, how deep is it necessary to go in order to find the proper focus of the disease? Virchow thinks that in all papillary cancers the region of the cancerous neoplasm is to be sought immediately under the surface. When deep cancers or cancroids break through to the surface, the latter is generally, at any rate at first, smooth. But when papillary cancers or cancroids break through, the specific neoplasm is generally in the skin or mucous membrane, or sometimes even in the papillary or villous excrescences themselves. And in the often tumid or even fungous edges of an ulcerated cancer, the connective tissue layers of the skin or mucous membrane are often permeated with alveolar formations.

When fifty years ago it was found by the aid of the microscope that cancer consisted of cells, there was a general demand for the specification of a

peculiar cancer cell. In consequence some micrographers were misled to distinguish between cancroid and carcinoma, describing the former as innocuous and the latter as malignant. But Virchow showed that cancroids (*e.g.* cheilo-carcinoma) may also become metastatic. Later on Virchow proved that there existed combination tumours whose structure differed in different places. Thus he found a 'recurring fibroma,' consisting nearly exclusively of connective-tissue fibres, and having only here and there a cancroid structure. Now, if the connective-tissue portion of such a tumour happens to be examined, a more favourable opinion will be formed of it than if the epithelial portion had come under the microscope. Papillary, villous, and cauliflower cancers belong to the class of combination-tumours. What is verruca cancroides but a mixture of cancer and a local hyperplasia of the pre-existing structures? Whether this hyperplasia appears in the form of peculiar excrescences, or in that of a continuous section, as is the case with solid internal tumours, depends entirely on the character of the parent tissue. The microscopist is liable to commit an error, because it is impossible to examine every part of a large tumour. But the clinical examiner is at a still greater disadvantage, since the outward form and course are not characteristic features, so long as there is no appearance of ulcerous or metastatic processes. It is quite right to attach importance to the examination of the lymphatic glands of the organs immediately affected, but they may be swollen from inflammation ; and if they are not affected, clinical examination is confined to the primary tumour.

Certainly there is the possibility of exploring a portion of the tumour by taking away a part of the periphery, or by procuring a particle from the interior by a trial puncture. This particle may, however, not belong to the malignant portion of the tumour, and a wrong opinion may be formed, 'but then the fault is that of the clinicist and not of the anatomist.' This is especially the case when two different neoplasms lie close together—*e.g.* uterine myoma and cancer, exostosis and sarcoma, papillary excrescences and ulcers. In cases of syphilitic tumours of the larynx, papillary hyperplasiæ of the adjacent mucous membrane are often observed, giving the impression of independent papillary tumours, but they will be found to possess a much thicker and stronger connective-tissue core than independent warts have, and the fine ramification of a genuine wart is wanting. Virchow is 'not aware that it has been clearly proved that hard, pointed condylomata, which *per se* must be regarded as innocuous local productions, occur side by side with genuine cancer of the larynx, or at a short distance from it.' No cancer bacillus has yet been found. But the cancer-cell theory may suffice to explain the symptoms, for animal or human cells have, as well as bacilli, an effect on the change of matter, and produce excretions. Latterly increase of sugar in the blood and decrease of urea in the urine have been regarded as important in diagnosis, but for prognosis they are not yet available. Under the influence of 'humorism' the opinion was developed that cancer rested on a dyscrasia. Virchow has, in opposition to this view, propounded the theory of the primary local character of even malignant neoplasms, declaring the dyscrasia to be secondary. Consequently he insists on the removal of quite recent malignant tumours by a thorough operation. He has discovered that the local growth of tumours is not from within as an increase of the primary centre, but that accessory nodi arise at varying distances, and eventually join on to the parent centre. Hence the accessory nodus is distinguished from the disseminated, and the genuine metastatic one only by the shorter distance from the primary centre ; and the scale of malignity is explained in this way, that one tumour produces more accessory nodi (cancer of the skin, lips, stomach, and uterus), while another produces more disseminated and metastatic nodi. In cancer the formation of accessory centres is of particular importance, as it happens, particularly in cancer of the liver, that the centre becomes cicatrised by fatty metamorphosis of the cells, while new accessory nodi arise on the periphery. Cancer cells are deciduous, and in a short time a retrograde metamorphosis sets in. If this could be at the same time promoted over the whole tumour, complete healing would be possible. Virchow considers spontaneous healing possible. He thinks that in any case in which operation is impossible, different means that are recommended should be tried, though it be impossible to imagine how the result may be effected. A hornifying cell is not suited to fatty metamorphosis ; hence in epidermoidal carcinoma (so-called cancroid) the centre must generally be removed. But the epidermoidal alveolar contents may fall out by ulceration, and thus complete healing follow. There is no method of protecting the tissues from infection by an existing cancer, but sometimes the nutrition of existing cancer-cells may be so far disturbed that they decay. This has been attempted with thermo-cauterisation and the outward application of various drugs. JOHN ELLIOTT.

ARTICLE 86.

DOLLINGER ON THE MASSAGE TREATMENT.

DR. J. DOLLINGER, lecturer on orthopædics at Buda Pesth, has recorded in the *Wiener Med. Wochensch.*, No. 2, 1888, several cases in which massage was applied. A few of these are here given. A gentleman, after standing for hours in water up to his hips shooting wild ducks, had pains in the joints of his arms and legs. In addition, he was hoarse, and it was evident that there was rheumatic anchylosis of the arytenoid articulations, the symptoms having lasted about eight months. Hard rubbing was applied, particularly to the edges of the joints and to the points of insertion of the articular capsules. After massage the patient took vigorous walking exercise. The result was striking. After the second massage he could move his joints freely, and after the twenty-second he could walk for hours without pain. To rub the arytenoid Dollinger grasped the larynx between his forefinger and thumb, and rubbed at first gently, and later more forcibly against the vertebral column. Under this treatment the feeling of oppression in the larynx disappeared. This could only be done four times, as the patient was obliged to leave. In a month attacks of pain recurred on massage being intermitted.

Dr. J. K. came to Dollinger to be treated for polyarthritis rheumatica chronica, and thus described his own case :—'From 1876 I suffered for six weeks from polyarthritis rheumatica acuta. My right knee remained swollen and stiff for three months afterwards. From 1876 to 1882 I had been quite well,

when an acute attack again occurred, which became chronic, lasting a year and a half. I again remained well till 1886. Then the disease appeared in a subacute form in the joints of both feet, and caused for two days a rise of temperature of from 0°·5 to 1°·0 C. I took salicylic acid, and could walk again, but only with difficulty. The dose was increased gradually to 8 grammes, 5 grammes being first taken, and two hours later 3 grammes in solution. The effect of this dose lasted from 18 to 24 hours, during which time there was no pain, and it was possible for me to walk, though imperfectly. The swelling of the joints also was reduced, and this occurred even at the time when, after a four months' continuance of the attack, the exudation was already firm. But, in spite of salicylic acid, one joint after another became affected, only the elbows remaining free. The large quantity of salicylic potass taken (500 grammes) seriously injured the nervous system. I found the effects less trying if the dose was taken after a meal, or, better still, after I had taken from 3 to 5 centigrammes of cucaine. After this I tried warm baths without any result.' In 1886 he came to Dr. Dollinger, and found some benefit from the massage treatment.

Dr. Dollinger then gives the case of a lady, aged 40 years, who for years had undergone various modes of treatment. There was a serous exudation in both knees, both patellæ fluctuated; the measurement round the left knee was 38 centimètres, that round the right knee 41 centimètres. The first phalanges of the toes were bent up, and the terminal phalanges bent down. The metatarso-phalangeal joints were swollen and painful on the slightest touch. The patient could only make a few feeble steps with much pain. Dollinger 'kneaded' both knee-joints daily, and rubbed the patellæ firmly against the bone in order to produce hyperæmia and to restore resorption. During the day the joints were tightly bandaged with flannel, and during the night with Priessnitz's bandages. There was as yet no anchylosis of the toe-joints, but the latter were painful from rheumatic infiltration, to ease which pain the patient stiffened the muscles. This caused the surfaces of the joint to adhere. These joints were rubbed and pressed, and when this was impossible passive movements were substituted. In Dollinger's opinion it is important that the interosseous muscles of the foot and the soft part of the sole should be well pressed and rubbed with strong central pressure. Active straining movements must follow later on. The result in this case of fifty-five operations was that the exudation in the left knee was completely resorbed, the measurement of the latter being 37 centimètres, and that of the right knee 38 centimètres. There remained but slight pain in the joints of the toes and metatarsal bones. The patient could take an hour's walk and mount the stairs.

A case of injury to the serratus anticus major is then recorded in a girl, aged 12 years, who fell on the ice on to his left hand with the arm stretched out. Violent pain was felt in the region of the clavicle. Dollinger found that the inner margin of the scapula stood far away from the thorax, the lower corner of the shoulder-blade standing out so much as to be observable through the clothes. The arm could only be lifted to the horizontal position. Corresponding with the scalene muscles an extravasation of blood could be felt under the skin, and the serratus anticus was evidently injured. After twenty days of massage treatment the patient could lift her arm to the full extent, but it required three months' treatment before the shoulder-blade was reduced to its proper place and all movements were free and vigorous.

The last case given is one of acute rheumatism of the intercostal muscles. The patient, a man, aged 26 years, was bent forward with pain, could hardly walk, and suffered much pain on breathing. The pain extended nearly over the entire thorax. It was difficult to begin the massage, as the man trembled and cried out with the pain at the slightest touching of the intercostal muscles. Very gentle stroking for half an hour moderated this sensitiveness, so that harder rubbing and pressing could be ventured on. In an hour the patient was able to breathe freely, and move the body backwards and forwards without pain. He was rubbed twice a day for an hour each time, particular attention being given to each intercostal muscle. In four days the patient was discharged cured. John Elliott.

Article 87.

POLÜBINSKY ON THE MORBID ANATOMY AND BACTERIOLOGY OF SCARLATINAL AND POST-SCARLATINAL NEPHRITIS.*

It is acknowledged that two forms of scarlatinal renal inflammation, viz., a primary or scarlatinal nephritis developing more or less simultaneously with cutaneous symptoms and a secondary or post-scarlatinal nephritis are admitted. Of the two the former has not given rise to especially lively disputes up to the present, not because there is any exceptional harmony of views between morbid anatomists, but chiefly because this 'primary form' was regarded as comparatively unimportant and nearly devoid of danger. As a matter of fact, Rayer, Rosenstein, Crooke, and Klein regard it as one of the manifestations of the scarlatinal process itself, while Bartels and Friedlaender attribute it to a high febrile temperature, and Klebs to lowered nutrition. Further, while Friedlaender, Klebs, and Bartels think that this morbid process is quite independent and distinct from post-scarlatinal nephritis, Crooke and Klein believe that the latter affection stands in an intimate genetic relation to infra-scarlatinal nephritis. As to post-scarlatinal nephritis, or glomerulitis, the views may be grouped into four main categories. According to the theory of Klebs, Waller (*vide* London Medical Record, August 1880, p. 325), &c., glomerulo-nephritis consists essentially in the development of connective-tissue cells between the capillaries of the glomeruli. Langhans, Cornil and Ranvier, Crooke, Friedlaender, &c., teach that the morbid process is based on the proliferation of endothelial nuclei of the capillaries. Hortolès, Marschand, Ribbert, &c., are of opinion that the most essential factor is represented by a leucocytic thrombosis of the glomerular capillaries, while Fischl seems to admit that a post-scarlatinal renal inflammation may be, at least sometimes, limited to the epithelial lining of the Bowmanian capsule with an increase in the pericapsular connective tissue.

The state of things clearly pointing to an impera-

* Polübinsky, Dr. Alexandr A.—Concerning Morbid Lesions of Kidneys in Scarlatinal Process. A Histological and Bacteriological Inquiry. (*Transactions of the St. Petersburg Society of Pediatric Practitioners*, 1887, p. 73; and the *St. Petersburg Inaugural Dissertation*, 1886, pp. 62.)

tive necessity of further researches in the same direction, Dr. Alexandr A. Polübinsky (*Transactions of the St. Petersburg Society of Pediatric Practitioners*, 1887, p. 73; and the *St. Petersburg Inaugural Dissertation*, 1886, pp. 62) has followed the suggestion of Professor N. P. Ivanovsky, and undertaken in the laboratory of the latter fairly extensive histological and bacterioscopical investigations concerning the nature of renal lesions associated with scarlet fever in general, and concerning the histogenesis of glomerulo-nephritis in particular.

1. *Histological Examination.*—Dr. Polübinsky's histological material was taken from fifteen cases of children, aged from 2 to 14. They may be divided into four distinct groups, the first of which includes four cases of post-scarlatinal nephritis; the second, two uncomplicated cases, where death took place quite suddenly on the fourth or fifth day of the disease; the third, two similar cases terminated suddenly about the eight or ninth day; and the fourth, seven cases complicated with malignant throat symptoms ('scarlatinal diphtheritis'), and terminated fatally about from the seventh to the eleventh day of scarlet fever. The outcome of Dr. Polübinsky's researches may be condensed as follows:—

A. *Post-scarlatinal Nephritis* (Group 1).—Macroscopically, the kidneys were found to be but slightly enlarged, with a dark grey cortical substance, and with glomeruli in the shape of 'prominent grey grains.' Under the microscope there were detected very considerable enlargement of the diameter and diminution of the curve of the glomerular capillaries, the glomeruli filling up the whole capsular cavity, and even distending the Bowmanian capsule. The epithelial covering of the glomerulus was invariably altered; some cells were only slightly swollen, but many were club-shaped, while as many others became detached and lay within the capsular cavity, showing all signs of a 'colliquative' or 'coagulative necrosis' of various stages. As to the capsular epithelium, as a rule, it did not present any changes beyond a slight swelling of its protoplasm, or some undue prominence of its nucleus. In one case, however (which is almost a counterpart of Litten's second case in the *Charité's Annalen*, vol. iv.), there was found an extensive 'nest-like proliferation' of the capsular epithelium, whose cells were very large and polyhedric; while there was present also a very considerable 'sickle-like thickening' of the Bowmanian capsule, which was dependent upon an intense œdematous infiltration of the (pre-existing) pericapsular fibrous connective tissue (but not upon any proliferation of the latter, as Litten thinks in regard to his case). In every one of the cases the endothelial nuclei of the glomerular capillaries were multiplied, swollen, and bulging into the vascular lumen, so as to considerably narrow the latter, and to greatly impede the passage of blood-corpuscles. As a matter of fact, both red and white corpuscles were either absent altogether from such capillaries, or their number was strikingly scanty in comparison with a normal kidney, and especially with a scarlatinal one from the rash-stage. Of other renal lesions, the author found (simultaneously with the above-mentioned):—(*a*) Small cellular infiltration around the glomerules and cortical blood-vessels, with minute extravasations from arterioles; (*b*) arterial lesions, consisting in increase of the muscularis and intima, with proliferation of their nuclei and diminution of the vascular lumen; and (*c*) swelling, and sometimes hyaline and fatty degeneration of the epithelium of urinary tubules, whose narrowed lumen was frequently occupied by hyaline casts. No micro-organisms could be found in this group of the cases.

B. *Scarlatinal Kidney* (Groups 2, 3, and 4).—Macroscopically the kidneys were found to be considerably enlarged, congested (dark-red), with intensely injected stellate veins; the Malpighian bodies having the shape of somewhat prominent red nodules. Microscopically, the glomerular capillaries were choked with red blood-corpuscles, 'money rolls,' which were often seen—sometimes side by side with leucocytes—also in the capsular cavity. The latter invariably contained an abundant albuminous exudation. The intertubular vessels were also intensely engorged, the congestion frequently leading to minute interstitial as well as parenchymatous extravasations. In more advanced cases, Group 4, there were present comparatively considerable morbid lesions of the tubular epithelium, whose cells were said to be enlarged and strongly granular, partly from albuminoid, partly from fatty degeneration. Their nuclei, too, were sometimes defined but indistinctly, and did not absorb any usual dyes; while the tubular lumen was not unfrequently packed up with hyaline casts, or with pigment granules, or, at least as far as convolute tubules were concerned, with detached and broken-up capsular or glomerular epithelial scales. In both of the cases forming the second group, within the glomerular capillaries, as well as within the intertubular arterioles, there were found micrococci which lay scattered, and were scanty in the former vessels, but densely grouped in great numbers ('masses') in the latter.

C. *Theoretical Corollaries.*—Having duly analysed and sifted the facts sketched above, and criticised the views of his predecessors, Dr. Polübinsky lays down the following general propositions:—

1. Post-scarlatinal nephritis is an acute glomerulitis which consists primarily in an intra-capillary process, or in a rapidly occurring and progressing proliferation and swelling of the endothelial nuclei with a corresponding narrowing of the vascular lumen, and with all consecutive disturbances of the glomerular action, inevitably following the said constriction.

2. The so-called 'post-scarlatinal' nephritis really originates much earlier than the term implies—in fact, it originates in the very beginning of a scarlatinal attack. To put the matter in other words, some soluble toxic products which are formed by the vital process of the pathogenic microbe of scarlet fever, and which are circulating in the patient's blood, act as an irritant on the endothelial lining of renal vessels and give rise primarily to proliferation of the endothelial nuclei. In some, comparatively by far rarer cases (most likely in those where the toxic matter is extremely powerful or concentrated), the endothelial irritation proves so intense from the very beginning, that it leads rapidly to an extreme constriction or even a complete obstruction of the glomerular capillaries with all its consequences—that is, leads to glomerulitis which then may persist, and usually persists, after the patient's recovery from his scarlatinal attack. In a vast majority of cases, however, the endothelial irritation does not reach such high degrees, and no glomerulitis (in the author's sense), but a kind of 'catarrhal nephritis' ensues.

2. *Bacterioscopical Researches* concerning the pathogenic microbe of scarlet fever were initiated by

Dr. Polübinsky (before the publication of Dr. Crooke's paper) in March 1885, and were conducted mostly in the Prince of Oldenburg's Hospital for Children. Having extracted a drop of blood from a diseased cutaneous region, the author inoculated with it a set of test-tubes with gelatine, and another set with meat-peptone agar-agar jelly. Only negative results were obtained when the material was taken later than the sixth day after the appearance of the rash, while the inoculation-material taken during the first four days gave (seemingly invariable) results in the shape of a bacterial growth of a peculiar and always the identical kind. The latter, however, may be said only with regard to the cultivation in agar-agar at 34° C., since the microbe did not grow at all in jelly at 15° C. The micro-organism found by Dr. Polübinsky was said to be a micrococcus which formed diplococci and tetrads, an individual coccus being somewhat larger than a staphylococcus. The microbes absorbed gentian-violet and fuchsine quite well. The same coccus was found in the serous contents of vesicles scattered over erythematous regions in a severe case of scarlet fever. As far as their outward appearance was concerned, the microbes were quite identical with those found by the author in renal blood-vessels in two cases of his second group.

To elucidate the nature of the micro-organisms, Dr. Polübinsky made several experiments on animals (dogs and rats), the cultures (diluted with water) being injected either under the skin or into a vein. In a majority of the experiments (the number of which is not stated), the inoculation failed to bring about any symptoms beyond a trifling rise of the temperature for a few days after the injection. But in two dogs, about the sixth and seventh day after the inoculation, there appeared a papulous rash accompanied with fever (39°·5 and 39°·8 C.). In one of these animals there were observed also faucial redness and cough. The animal having been killed, an enlarged lymphatic gland, compressing the pneumogastric near the gullet, was found. In the other animal all the symptoms soon disappeared spontaneously. Dr. Polübinsky is inclined to think that the affection caused in his dogs by his microbe was possibly akin to equine scarlatina as described by Professor Williams. [Papers on scarlatinal and post-scarlatinal nephritis may be found: Hajek's, in the London Medical Record, February 1881, p. 68; Atkinson's, *ibid.*, October 1886, p. 432; Leyden's, *ibid.*, August 1887, p. 335. In the *Ejenedelnaia Klinitcheskaia Gazeta*, No. 4, 1881, p. 49, Professor N. P. Ivanovsky describes a peculiar form of glomerulo-nephritis which he met in a case of a boy with acute nephritis, accompanied by an intense general dropsy and albuminuria. The Bowmanian capsules were found to be 'greatly distended by fibrinous or croupous exudation, consisting of a dense network of fine fibrils, with leucocytes, red blood-corpuscles, and broken up epithelial cells entangled in its fine meshes.' 'The exudation compressed the glomeruli so strongly that their size was twice as small as in the normal condition, while their capillaries were quite empty.' The endothelial nuclei of the latter were swollen. Dr. A. Remezoff's special monograph on exudative glomerulo-nephritis of the kind is given in a brief abstract in the London Medical Record, April 1884, p. 169. A case of post-scarlatinal nephritis is detailed by Dr. Mikhail Stepanoff in his work on morbid lesions in acute uræmia (*St. Petersburg Inaugural Dissertation*, 1882, p. 8). The most pronounced lesions (fatty degeneration of the epithelium, and hyaline, granular, and blood casts) were found by him in the convolute tubes, and then in the descending portions of Henle's loops. The glomerules, however, were also changed, the lesions consisting in swelling and albuminoid and fatty degeneration of the capsular and glomerular epithelial linings, as well as in hyaline and fine granular intra-capsular exudation, and in a peri-capsular accumulation of leucocytes. Dr. Dunin, in his monograph on nephritis (1881), says that in post-scarlatinal cases he used to find 'a fine cellular infiltration of the renal stroma and an intense injection of the glomeruli, which filled up the whole capsular cavity.'—*Rep.*]

V. Idelson, M.D.

Article 88.

BISHOP ON HAY FEVER.

Dr. Seth S. Bishop, in the First Prize Essay of the United States Hay Fever Association for 1887 (*Journal of the American Medical Association*, July 23, 1887), advocates what he terms the nerve theory of this disease. Three factors, he considers, account satisfactorily for all the phenomena of a paroxysm: first, highly susceptible nerve-centres; secondly, over-sensitive nerve-ends; and thirdly, the presence of one of a large number of exciting causes. 'Most foreign substances which are liable to come in contact with the nasal mucous membrane will provoke paroxysms.' He lays especial stress upon the irritating effect of dry, hot air; and much-thumbed books and musty newspapers he enumerates as hitherto unmentioned exciting causes. In the treatment, the best of all drugs the author has found to be a combination of morphia and atropia in compressed tablets. The relative proportion is $\frac{1}{300}$ grain of atropia to $\frac{1}{8}$ grain of morphia, $\frac{1}{150}$ grain of atropia to $\frac{1}{4}$ grain of morphia, or $\frac{1}{100}$ grain of atropia to $\frac{1}{2}$ grain of morphia, if so much were needed. The author has by this means never failed to prevent the development of an attack, or at least to materially abridge it, if administered in the early stage of hay fever or acute nasal catarrh. Cucaine he applies by preference in a 6 to 10 per cent. powder, with sugar of milk by means of a small insufflator. It is well, he thinks, however, to be aware that in a few cases cucaine gives rise to severe secondary hyperæmia, attended with intense hyperæsthesia, and all the symptoms of severe hay fever. When an attack seems imminent, the determination of blood to the turbinated bodies may be relieved by derivation by means of active muscular exertion. 'In this manner the pent-up nervous energy, struggling to escape, finds vent.' In regard to the important and vexed question of the operative treatment of these cases, he considers that it should be confined to those instances in which there is a diseased condition of the mucous membrane of the nose or throat, or to those individuals in whom the paroxysms are provoked generally by irritants acting on these parts. The reason that operative measures for the destruction of the offending mucous membrane and nerve-ends in the nose often fail to cure, he attributes to the fact that the nerves distributed to those parts are not the only ones that are oversensitive, and that the irritants impress the nervous centres through various other channels. He also mentions as a caution that he has seen severe asthma produced by cauterisation of the back part of the

inferior turbinated body. His practical test for operation is the effectiveness of a 4 or 10 per cent. solution of cucaine in arresting the attacks. From a study of several hundred cases, the author concludes that in nearly one-half the number, attacks were occasioned not by local irritants to the nose alone, such as dust, but by causes of quite a different nature. With the exception of strong light, the author does not, however, specify these extra nasal causes. From his remarks it is evident that the author uses the term 'hay fever' in a very wide sense, making it include neurotic nasal attacks, quite unconnected with pollen, an application of the term which appears to us hardly justified.

E. Cresswell Baber, M.B.

Article 89.

JASTROWITZ ON LOCALISATION IN THE BRAIN.

Dr. Jastrowitz, addressing a Berlin Medical Society (*Deutsche Med. Zeitung*), began by drawing attention to the fact that twenty years ago the mortality after trephining was 53 per cent., whereas now since the introduction of antiseptics the percentage is only between 3 and 4. In England and America brain surgery is being carried on with ever increasing boldness, so that tumours of the brain, after having been accurately localised, are resected. The point of first importance is to determine the exact seat and nature of the disease with a view to operating with precision. In some cases it may be quite evident that a tumour exists, but it may be difficult to point exactly to its position. On the other hand, there may be quite clear local symptoms, whilst the nature of the affection may be very uncertain. It is, therefore, very important to endeavour to extend the range of symptoms especially in the direction of the too much neglected psychical side, and to define so exactly the local symptoms, that it shall be possible to form a safe diagnosis, even though neither of the groups of symptoms be complete. Jastrowitz then refers to seven cases he has observed. He emphasises the fact that the motory region of the brain is the starting-point for all diagnosis and treatment, because whatever we know about the functions of the hemispheres comes to us through our knowledge of the motory region. He then explains the differences in the affections of the medullary substance and the cortical substance, and shows that the destruction of the cortex affects the medulla both physiologically and pathologically. In this connection particular attention must be devoted to the anatomical conditions of nutrition. So early as 1875, he pointed out that in cases of lesion of the brain, not so much positively what disturbances have been caused, as negatively what functions remain intact must be observed; for the latter may then be assumed not to be connected with the lesion. Further, all those symptoms must be noted which appeared immediately after the lesion and still continue after recovery. These principles have since been worked out by English and German observers. Exner has, with regard to motility, made a distinction between *absolute* cortical regions, injury to which produces unfailing paralysis of the corresponding limb, and *relative* cortical regions, injury to which may, indeed, cause paralysis, but not necessarily. This applies also to the senses of sight and hearing. The functions of the two hemispheres are by no means identical, but differ essentially, as may be judged alone from the position of the centre of speech on the left side. Sensibility has no absolute regions, but Jastrowitz believes that the sensory impressions that subserve the perception of movement, particularly the muscular sense, have their centres, not as Nothnagel has latterly asserted in the parietal lobe, but in the motor region. This cannot be proved on the left side, because there the upper parietal lobe belongs to the absolute motory region; but it can be proved in the right hemisphere. As a confirmation of this, a case is mentioned in which the right parietal lobe was found to be quite intact, as well as the posterior central convolution. A circumscribed tumour lay in the highest portion of the anterior central convolution, affecting the paracentral lobule, and causing swelling of the first frontal convolution. This caused complete cessation of muscular sensibility.

Jastrowitz then treats of hard circumscribed tumours (especially tubercular) and their effects. Tubercular tumours are composed, to a great extent, of confluent nodi, joined together by connective tissue, which increase to such an extent that frequently entire thicknesses of tissue, vessels, nerve-trunks, &c., are enclosed and crushed, becoming a prey to coagulative necrosis and cretification. Three stages must be distinguished in the course of tubercles and hard tumours, viz., latency, irritation, and renewed latency. Of three of Jastrowitz's cases of tubercle-nodi in the brain, one was isolated and the other two multiple and symmetrical. The latter were, therefore, probably the result of embolism, while the first was probably of traumatic origin. It has struck Jastrowitz that in a very great number of cases of chronic phthisis in imbeciles the most diverse organs and glands of the chest and abdomen become affected, while the brain and its membranes remain intact. He has often observed that the tubercular nodi take their rise in the brain, then attack the membranes, and lastly, after passing through the pia mater and dura mater, attack the bone. This is of importance for the surgeon, who may be disposed to assume tuberculosis of the bone only, whilst the origin of the process lies very deep in the brain. The frequent assertion of the handbooks that a tumour may gently stretch a nerve-substance without injuring it, is incorrect; for a malignant tumour transforms nerve-substance into a neoplasm, while a benign one induces atrophy of the nerve-substance. A tumour attacking the great commissural fibre-system may paralyse the co-ordinate movement of the extremities, and will, if it grows from the periphery towards the median line, ultimately destroy that movement, since the fibres of the corpus callosum radiate high up from the median line. A case in point was shown, in which, in addition to paralysis of the extremities and a peculiar disturbance of sensibility, there was Jackson's epilepsy, and *déviation conjuguée* with hemiopia (the last is inexplicable). But it is incorrect to assume that there is in the frontal lobe a sight centre for the opposite eye. Another case of Jastrowitz's proved the remarkable fact that during the last days of life a single muscle—the extensor hallucis longus—became contracted. In the *post mortem* there was found a small recent nodule about four centimètres from the longitudinal fissure in the posterior central convolution. We may venture to think this nodule responsible; for the extensor hallucis has an independent movement, and Ferrier has localised

the centres for the movements of the toes in the posterior central convolution. Now, in neither of these cases could the disturbance of motility be deduced from the disturbance of sensibility; for there was no ataxia or want of co-ordination, and paralysis preceded the disturbance of sensibility. The one case in which a clot lay at the apex of the anterior central convolution and in the paracentral lobule and a nodule in the gyrus fornicatus speaks against Nothnagel's localisation of the muscular sense in the upper parietal lobulus, and decidedly for the English opinion, according to which muscular sense and sensibility lie in one and the same convolution, which corresponds with the gyrus fornicatus and the gyrus hippocampi taken together. Concerning lesions due to clots, Jastrowitz says little. If a patient with right-sided hemiplegia answers no question at all, there may be various reasons. There may be cortical deafness or psychical blindness. The connection between the hearing and motory regions may be cut off; or there may be such other functional affections as of the attention of the patient, his will, memory, &c. That these may happen along with deposits in the cortex is shown by one case, in which there was, in addition to sensory and motor aphasia, a disturbance of articulation, though the deposit lay above the corpus striatum in the brain-mantle. Operative measures may be adopted only if it can be assumed that organic brain-disease exists. For instance, it would not be right to operate in the case of imbecility or genuine epilepsy on the ground merely of reported injury. If epilepsy continues for some time, an epileptic constitution is the result, and, even after extirpation of the original central cause of convulsion, the disease extends to the next centre, and so on from one centre to another. Hence extirpation of such a centre of irritation offers no advantage. Further, it must be borne in mind that Jackson's epilepsy may arise from peripheral injury, and, again, that the peripheral irritation, causing epilepsy in a reflex way, may lie in the central nervous system but outside of the motor region. Besides this, cases have been observed of localised convulsions even with paresis, where the *post mortem* has shown nothing of a pathological nature in the brain. Only Jackson's epilepsy with chronic paralyses could indicate a cortical deposit. Nor is the dura mater always tense and the corresponding hemisphere swollen, but rather the opposite, in that portion of brain which is the seat of a tumour. In case of operation the opening in the skull must be made as large as possible. But, as too enlarged openings may cause cerebral œdema, only deposits of a certain size admit of operation. Abscesses are always to be operated for. As to tumours, the surgeon must hope that they lie on the periphery, and neither are too extensive nor affect vital points. Unfortunately these things can be ascertained only during the operation. One of Drummond's cases proves that in certain conditions of pressure the mere opening is of great use. And Magendie's experiments suggest the question whether, for instance, in order to reduce the pressure in cases of peripheral hæmorrhage, such a limited opening would not be of advantage, and this would give a further indication for trephining. But it must be first decided whether the sudden cessation of pressure might not be injurious. In regard to extirpation, it must be considered that in the brain each point is connected with every other, and that secondary degenerative contraction and hæmorrhage may follow removal of pressure. Jastrowitz calls upon German surgeons to follow up the discoveries of the English and American authorities on the subject.

John Elliott.

Article 90.

HINTERSTOISSER ON RESECTION OF THE PYLORIC END OF THE STOMACH.

The following case is reported from Billroth's clinic by Dr. H. Hinterstoisser in the *Wiener Med. Wochensch.*, Nos. 4 and 5, 1888. A married woman, aged 42 years, had had slight irregularities of the menses as to quantity and duration for the last twelve years. During the last three months the menses became thin and watery. She had had four children, the first born twenty-one, the last twelve, years ago, delivery having been always difficult. Three of the children are alive; one died when six weeks old. In March 1887 the woman, who had been otherwise healthy, complained of sickness and undefined pains in the stomach, lasting for a few days only. However, in May there suddenly occurred, without apparent cause, a return of the pains in greater intensity, followed by violent and frequent vomiting, which lasted a fortnight. At the same time she first noticed a spherical swelling of the size of a fist beneath the navel. The vomiting ceased, but from time to time the pains, though less violent, returned. Careful diet and cessation from hard work rendered these symptoms endurable. From May the stools were retarded, but there were no urinary difficulties. The swelling in the abdomen increased slowly and imperceptibly to its present size. In November she entered the hospital with a view to the removal of the tumour. At that time she presented the appearance of an average-sized, fairly strong-built woman, rather thin, and of pale and slightly yellow complexion, with flushed, sunken cheeks. The lungs and heart were normal. The abdomen, marked with striæ gravidarum, protruded perceptibly from the navel downwards. Above the symphysis pubis, and corresponding with the protrusion, a heart-shaped resistance reaching to beneath the navel was felt, the lower limit not being clearly palpable. The region of dulness corresponded with this. The tumour felt smooth, did not fluctuate, and was apparently of firm structure, being movable, upwards particularly, less laterally, presumably on account of adhesions to the anterior parietal peritoneum. Its form was spherical, and its size that of an adult's skull.

After the usual preparations for laparotomy had been made, the operation was done by Dr. Billroth at the clinical lecture on Nov. 10. The patient was put under chloroform. An abdominal incision in the linea alba, beginning a little above the navel and passing the same a little to the left, was terminated a hand-breadth above the symphysis pubis. Separation of the layers of the abdominal wall followed. The parietal peritoneum was not clearly distinguishable on account of adhesion to the surface of the tumour. A corresponding incision was made into the substance of the large fluctuating tumour, whose walls were tense. A considerable quantity of a somewhat thick, dirty-brown-red fluid mixed with a crumbled substance escaped. This was at once washed off by copious irrigation of sublimate, and the cystic cavity, which was coated

with a rusty-coloured substance, was also washed with sublimate. After separation of the adhesion bands and of the pseudo-ligamentous attachments of the tumour to the anterior parietal peritoneum without any great difficulty, the entire tumour was lifted out of the abdominal cavity. But unexpectedly the stomach was also dragged forward with it, and it appeared that the tumour largely and firmly adhered to the great curvature (of that organ). It proved impossible to effect a separation, for the muscular gastric wall was so intimately joined to the cyst that, after separation, only the mucous membrane would have remained. Billroth therefore at once determined on resection, the conditions being particularly favourable for it, as the posterior gastric wall had already been made accessible. The adhesions of the tumour to the parietal peritoneum proved to be portions of the ligamentum gastro-colicum; therefore, after the tumour had been laid bare and isolated, the approach to the great curvature and the posterior gastric wall was free. The gastric lumina were now closed to the right and left of the tumour by loops of iodoform wick. But, as so frequently occurs, this method failed, and the assistant had to use his hands. No clamps were used. The gastric wall was now cut with the scissors in a slanting direction to the right upwards at a fair distance from the left of the tumour. Close occlusion sutures (Czerny's) followed each cut at once, until the wound between the great and small curvature was so far closed that as much remained as was about equal to the wound yet to be made across the right hand portion of the stomach. Then the pyloric tube, close to the point of adhesion of the tumour, was cut through from the great curvature nearly vertically to the small. The tumour, with the resected portion of the pars pylorica, being thus freed, was removed. Billroth then proceeded to bring together the opposite gastric lumina. The edges met readily after a slight pull, then were stitched together with a few sutures going through the mucous membrane and muscle. This was followed by close intestinal sutures along the whole circumference. Silk alone was used. The stomach was then replaced in the cavity and the integuments stitched together. The wound was closed and an iodoform bandage applied. The whole operation lasted exactly two hours. The patient was somewhat collapsed, and complained of pains in the stomach. Ice pills were given. The temperature and pulse improved steadily. On the third day after the operation there was breaking of wind, but no eructation. The patient received milk, brandy, and Medoc wine in teaspoonfuls. On the fifth day she had quiet sleep, without morphia suppositories, and her general health was good, and the next day she was free from pain. On the seventh day the bandage was changed. The wound showed no reaction, nor was there any secretion. The patient took very finely hashed fowl, brain, and wine-soup with a good appetite, and no bad consequences. On the sixteenth day she ate roast fowl and ham. A few days after this she had pains in the stomach. A clyster of senna was given, on which followed a copious soft stool. The patient began now to sit up. On the twenty-third day the sutures were removed. First intention. The next day the abdominal corset was put on, and on the day following she walked for the first time. After this, recovery was uncommonly rapid, the appetite being excellent, until on the thirty-seventh day she was discharged cured. After giving an anatomical description of the tumour, Hinterstoisser goes into its histology. According to structure and form, it belonged to the class of large-celled polymorphous round-celled sarcomata. The frequently recurring apparently alveolar structure may be explained by assuming dropsical serous saturation of the tissue, in which the cells, being forced asunder and pressed together in rows, form a network enclosing the irregular gaps filled with fluid. The point of origin of the neoplasm is presumably in the sub-serous and intermuscular connective tissue of the gastric wall, its most active growth being in the sub-serous stratum. In the interior of the tumour there must have been early retrogressive metamorphoses of various kinds (dropsical degeneration of the cells, &c.), followed by softening and liquefaction of the tissue-substance. In one place, near the gastric lumen, the tumour absorbed the muscular tissue, and caused slight, but important, ulceration of the mucous membrane. After completed ulceration and fistula-formation, the digestive gastric secretions may have hastened extensive decay of the tumour-substance. This supposition would also be borne out by the remarkable rusty brown colour of the cystic fluid and necrotised tissue-layers on the interior of the wall from the action of acids. But unfortunately, as the cystic contents were lost during the operation, it was impossible to prove it by microscopical and chemical examination. Hinterstoisser supposes that this is the first case recorded in which gastric resection has been done for sarcoma, primary gastric sarcomata being of very rare occurrence.

John Elliott.

Article 91.

JACOBI ON THE FEEDING OF SICK CHILDREN.

Professor Jacobi, of New York, contributes to the *Archives of Pediatrics*, Vol. v., No. 1, a very exhaustive article. He points out that from the very first month of life a distinct diastatic effect is produced by the oral secretion and that it increases every month. Moreover, this effect persists in the stomach for from half an hour to two hours; but it ceases altogether as soon as hydrochloric acid has begun to be secreted. Lactic or other organic acid alone is secreted with the pepsine in the stomach for the first half hour or more, and in debilitated subjects for the greater part or the whole of the digestive period. The diastatic power of the pancreas begins with the fourth week only and remains feeble up to the end of the first year.

To increase the secretion of pepsin and hydrochloric acid, which are deficient in anæmia, convalescence, and more particularly in fevers, large quantities of water are required, and peptones are not absorbed unless greatly diluted. Therefore, not only should infant's food be mixed plentifully with water, but water should be given alone, occasionally, more especially in the summer time. Water is indicated in diarrhœa, general inanition, perspiration, and feverish diseases; where it is not retained, enemata should be employed. Further, where metamorphosis is slow, water increases the elimination of urea and carbonic acid; when the urine is concentrated, water protects the kidneys from undue irritation; it liquefies the mucus in laryngitis and bronchitis, and removes the dryness of the

bowels in constipation. On the other hand, in some forms of acute gastro-enteritis, where vomiting and diarrhœa are excessive, the only salvation lies in total abstinence for from four to ten hours. Sugar must be added to an infant's food because human milk contains a larger proportion than that of either cow or ass ; but cane sugar is preferable to milk sugar, because it is much less rapidly converted into lactic acid.

Milk should never be given to well or sick without the addition of table salt. This, amongst other things, prevents the solid coagulation of milk. Fatty substances must be given with caution. The white specks in babies' motions are nearly always composed of fat and epithelium, and the administration of cream or cod-liver oil is very injurious in such cases.

The mixed milk of a dairy is preferable to that of one cow ; it must be boiled before being used. Condensed milk is not uniform, and its use for that and other reasons is precarious. Goat's milk contains too much casein and fat besides being otherwise incongruous. Skimmed milk, prepared in the usual slow way, is objectionable, because acid. No infant's food should contain more than one per cent. of casein. The best way to dilute cow's milk and, at the same time, render it less liable to coagulate in large lumps is to add a decoction of a cereal ; barley, when there is a tendency to diarrhœa ; oatmeal, when the tendency is to constipation. The newly-born should have boiled milk (sugared and salted) mixed with four or five times its quantity of whole-barley water ; at the age of six months, they should be of equal parts. Gum arabic and gelatin may be used in a similar manner. These are not only diluents, but, under the influence of hydrochloric acid, nutrients. Beef-tea, or, when there is diarrhœa, mutton-broth, is advisable towards the end of the first year or much earlier than this in rickets, undue adiposity, and retarded teething. Peptonised beef-tea, such as Rudisch's, may be mixed with broth. Scraped beef is easily digested, but is open to the objection that tænia medio-canellata may be caused by it. The white of an egg, beaten up with six ounces of water and a little salt, is a good temporary expedient. Cow's milk is rendered more digestible for those infants or adults who cannot tolerate it in its ordinary condition, by mixing half a teaspoonful of dilute hydrochloric acid with a pint of water and a quart of milk and then boiling it.

Alcohol is contra-indicated in meningitis, acute cardiac ailments, gastro-enteritis, peritonitis, and acute dysentery. It is stimulant, nutritive, antipyretic, and antiseptic. The amount necessary to reduce the temperature is that comprised in about three ounces of whisky or brandy. It must always be diluted either with water or with properly prepared milk. 'Whoever is not afraid of giving six ounces of whisky daily to a child when one or two fail, or ten or twelve when six fail, will soon convince himself of its power for good.' Whisky is, as a rule, preferable to other stimulants ; the ether of wines neutralises the antipyretic effect of the alcohol, and the fusel-oil its stimulating action.

RALPH W. LEFTWICH, M.D.

M. PANEL has invented a photographic machine, by which the posterior section of the eye may be photographed in a few seconds. This machine will enable a physician possessing a certain knowledge of photography to reproduce the image of lesions in the eye.

ARTICLE 92.

PYE-SMITH ON PROGNOSIS.*

DR. PYE-SMITH sums up the conclusions arrived at in his paper in the following prognostic aphorisms :— Epidemic diseases are most fatal when first introduced. Acute diseases, following upon chronic, are the most dangerous. A degree of pyæmia, which is of slight importance in a child, is grave in an adult, and imminently perilous in an old man.

Typhus fever is most dangerous to persons who have passed their sixtieth or fiftieth year ; less so to infants and those between thirty and fifty-five ; and least dangerous to children about five and to young adults.

Small-pox in these particulars closely resembles typhus. Whooping cough is dangerous during infancy, and benign after five years of age. Scarlet fever seldom takes on a malignant form when it attacks adults. Acute lobar pneumonia has usually a favourable issue in youth, and is usually fatal in advanced years. In young adults pneumonia is rarely fatal unless the patient has disease of the kidneys or of the heart, or is of intemperate habits. Pneumonia is also a dangerous complication of fevers or acute rheumatism. Acute lobar pneumonia, when not fatal, leaves the lung uninjured after recovery, and the patient in good health. It is seldom or never followed by phthisis, even when it attacks the apex. Primary acute pleurisy is not fatal, unless it is accompanied by pericarditis. Pleurisy, if under treatment it ends in death, is secondary to tubercle or to cancer, or to disease of the kidneys. Œdema of the larynx is very seldom dangerous ; œdema of the lungs is usually so. Acute bronchitis is a frequent cause of death in young children and old people. Fatal bronchitis, in persons between ten and sixty years of age, is either capillary or secondary to tubercle. Phthisis is most pernicious when it is hereditary. Consumptive patients, who lose flesh and colour and appetite, with but little signs of disease in the lungs, are in a worse case than those who have marked local symptoms, but whose appetite and nutrition are good. Hæmoptysis, even when copious, is not always of ill omen.

It is rare for hæmorrhage from either the lungs or the stomach to be immediately fatal, except it proceed from an aneurysm. Chronic valvular disease of the heart, when it complicates phthisis, does not aggravate the latter—rather it checks its progress. Sudden death is more frequent from aortic than from mitral lesions ; in regurgitant than in obstructive disease of the aortic valves, and in stenosis than in dilatation of the mitral orifice. Apoplexy, when ingravescent, is commonly fatal. In apoplectic attacks, the ultimate prognosis depends chiefly upon the degree and continuance of unconsciousness ; the immediate prognosis upon the degree in which respiration is affected. Chronic diseases of the spinal cord are more likely to end favourably in women than in men. Chorea is only fatal when the patient cannot sleep. Malignant tumours are more rapidly fatal in the young than in the old. Cancers in the aged are sometimes exceedingly slow in their process, and may even in rare cases atrophy. Stone in the kidney may frequently be cured without operation. The opposite is true of stone in the bladder. Diabetes is rapidly fatal when it occurs in young men, more curable in middle life, and of little danger

* *Observations on Prognosis.* By P. H. PYE-SMITH, M.D., *Guy's Hospital Reports*, vol. xliv., p. 59.

in later years. Diarrhœa is dangerous only in infants and in persons above sixty years of age.

Bertram C. A. Windle, M.D.

SURGERY.

RECENT PAPERS.

93. Smith, Noble.—On the Treatment of Flat Foot. (*Practitioner*, January 1888, p. 31.)

94. Taylor, John, M.D.—On a Case of Cholecystotomy for Gall-stones, with Remarks on the Treatment of the Impacted Calculus. (*Brit. Med. Jour.*, Jan. 1888, p. 130.)

95. Cadogan-Masterman. — On Dermapenthesis. (*Brit. Med. Jour.*, January 1888, p. 187.)

96. Jackson.—On Antiseptic Irrigation of the Knee-joint. (*Birmingham Med. Rev.*, February 1888, p. 58.)

97. Poncet.—On Autoplasty.

98. Dunlap, Dr. Alexander.—Abdominal Section on a Female Child not an Hour Old. (*Jour. American Med. Association*, January 14, 1888, p. 50.)

99. Reynolds and Watson.—On the Treatment of Stricture of the Urethra. (*Journal of the American Med. Association*, No. 2, 1888.)

100. Keen.—On the Healing of Operation Wounds. (*New York Med. Record*, No. 4, 1888.)

101. Beck.—On the Treatment of Fracture of the Patella. (*Beiträge zur Klin. Chir.*)

102. Zeller.—On the Surgical Treatment of Deep-seated Perirectal Abscess. (*Beiträge zur Klin. Chir.*, Band iii., Heft 2.)

Art. 93. *Noble Smith on the Treatment of Flat Foot.*—In the *Practitioner*, Jan. 1888, p. 31, Mr. Noble Smith describes a plan of treatment of flat foot which promises to be very successful. It consists in arching the feet as much as possible by manual pressure during the setting of a plaster-of-Paris bandage. As a rule, some improvement in position may be effected by pressure with the hands, but it may be desirable in severe flat foot to use greater force under the influence of an anæsthetic. The sole can then be bent over a small sand-bag, or other firm pad. In moulding the foot in the bandage it is also desirable slightly to invert the sole. Before applying the bandage a few days' rest does good, and after it is applied it is better to rest again for a few days before allowing the patient to walk. If there be much deformity a renewal of the bandage and a replacement of the foot in an improved position may be made every fourteen days, or at longer intervals, until a satisfactory position is attained; or the bandage may be kept on in the first place for several weeks. In cases where there is firm contraction of the peronei muscles their tendons must be divided, and the operation recovered from, before the bandages are applied. When the bandages are discontinued a light and simple mechanical support will be necessary for a time. The patient should avoid standing and prolonged walking, but tricycle exercise in moderation is good, and the special exercises, such as tiptoe movements, and walking on the outside of the feet, and with the toes forward, are of great value.

94. *Taylor on a Case of Cholecystotomy.*—In the *Brit. Med. Jour.*, January 1888, p. 130, Dr. John Taylor records a very interesting case which may throw some light on the future treatment of those cases in which the removal of an impacted stone in the duct is attended with difficulty. Mrs. K——, aged 42, was seen by the author on March 21, 1887; for four or five years she had noticed a swelling on the right side of the abdomen, this had grown considerably larger during the last eight months, but had given no pain. The tumour was very freely movable, and careful palpation elicited a vibratory thrill; the case was diagnosed as one of distension of the gall-bladder. On April 2, Dr. Taylor opened the abdomen on the outer side of the right rectus muscle, immediately over the most prominent part of the tumour, and on dividing the peritoneum it was seen that the diagnosis was correct. A puncture was made in the tumour, and fully a pint of clear, somewhat glutinous fluid was evacuated; the puncture was then enlarged and the index finger introduced within the gall-bladder. Four large stones were removed, but one was felt wedged into the cystic duct so firmly that it could not be got away. Being afraid to attempt crushing the stone from outside the duct, the incision in the gall-bladder was sewn to the abdominal wound by several stitches, so as to leave an external opening through which a large-sized rubber tube was inserted. Directions were given for the gall-bladder to be syringed out with warm water every night and morning through the drainage-tube. Sixteen days after the operation, the gall-bladder was examined with a pair of Lister's sinus-forceps, and it was found that the stone was loose and soft, it broke into pieces on being touched by the forceps, and was syringed away by degrees. After a few days the tube was removed, and the wound allowed to contract. On April 26 the patient left for home, quite convalescent, with the gall-bladder and ducts patent and free from any calculus. The author remarks that the daily washing out with water in cases where a calculus is retained after an operation is a point worth bearing in mind.

95. *Cadogan-Masterman on Dermapenthesis.*—In the *Brit. Med. Jour.*, January 1888, p. 187, Mr. Cadogan-Masterman contributes an article on the value of grafting large ulcerating surfaces with portions of young wild rabbit's skin. The author has tried this plan in several cases with most excellent results. In order to secure success, healthily granulating surfaces should be selected for treatment, and young wild rabbits for the discs of skin; these may be from half to one-and-a-half inches in diameter, and, operating alone, rarely more than one can be taken from each animal. The animal is killed by a blow on the back of the neck; then immediately, while the skin is still alive, a disc is cut from the abdomen of the rabbit. Young wild rabbits are best, because their skin is thin, contains no fat, and separates readily from the subjacent fascia. There is no need to remove the fur, as it comes away within a week; the skin should be pressed closely down on the surface of the wound, so as to expel the air, and kept thoroughly warm by poultices or a hot-water bag for two or three days. It is doubtful whether the transferred skin really unites and grows with the surface it covers; in every case the fur-bearing layer separates sooner or later, so it can only be the inner layer that is revitalised. It is also remarked that, although prolongations are seen starting from the edges of the adhering discs, they are neither so marked nor so vigorous as are seen in cases where grafts are used of human skin.

96. *Jackson on Antiseptic Irrigation of the Knee-joint.*—In the *Birmingham Med. Rev.*, February 1888, p. 58, Mr. Vincent Jackson describes a case in which he practised antiseptic irrigation of

the knee-joint with marked success. This treatment was initiated by Schede in 1875, but it was not much used until Dr. Weir, of New York, read a paper before the Medical Society of that city on the subject in 1886. In the following case the instructions laid down by Dr. Weir were carried out, but the operation was not quite successful the first time as the notes will show. A man, aged 25, was admitted in June 1887, on account of chronic serous effusion into both knee-joints, especially the left. On June 27 the joint was aspirated and thirty ounces of synovial fluid drawn off; an India-rubber bandage was applied, and the limb completely fixed with splints. The joint, however, soon refilled. The limb was then thoroughly cleaned by scrubbing with soap and water and antiseptic lotions; the patient was placed under chloroform, and the following operation was performed, under the spray. A medium-sized trocar and cannula was plunged into the joint on the inner side, and, after twenty ounces of fluid had been withdrawn, the interior was irrigated by a 5 per cent. solution of carbolic acid in distilled water, but in consequence of an albuminous precipitation taking place from the contact of the two fluids the cannula soon became choked with large masses, and in spite of every effort to expel these a number of flaky lumps were left in the joint. The limb was fixed in splints and dressed with Listerian dressings. On July 14 the dressings were removed, and it was evident that the operation had not been successful, as the joint was again full of fluid. On July 23 the patient was again put under chloroform, and a larger trocar and cannula were pushed into the joint on the outer side; twenty-two ounces of coffee-coloured fluid were removed, containing a large amount of precipitated albumen in flakes of a reddish colour. The joint was then washed out with distilled water until it flowed away perfectly clear, and apparently free from admixture with synovial fluid. Irrigation with a five per cent. solution of carbolic acid in distilled water was now carried out, the cannula was withdrawn, and the joint enveloped in Listerian dressings, the limb as before being fixed upon a splint. On Aug. 6 the dressings were removed, and no further effusion had recurred. On Aug. 24 the patient was discharged cured.

Richard Neale, M.D.

97. *Poncet on Autoplasty.*—At a recent meeting of the Surgical Society M. Berger communicated a note of M. Poncet concerning two cases of loss of substance, in which the author employed the autoplastic method. The first case was that of a girl of 15, who had suffered for six years from a loss of substance from 6 to 7 centimètres deep, in a large cicatrix at the level of the external malleolus. M. Poncet removed a fragment of flesh from the corresponding gluteal region, and placed it on the part where the loss of substance occurred; this part was previously stimulated. Suture was then effected. The member was maintained in flexion. On the ninth day half the pedicle was cut; on the thirteenth day it was entirely severed; the flesh was healthy. The wound healed slowly, but recovery ensued. Eight days after the pedicle was cut, the piece of flesh received the impression produced by contact. In the second case the patient was a young man who presented a loss of substance resulting from a vast eschar at the level of the olecranon. The ulcerated surface was removed; a piece of flesh removed from the side of the trunk (to which it remained attached by a pedicle) was applied. The pedicle was half severed on the ninth day, and completely severed on the thirteenth day. The flesh grew, but a sphacelated spot remained. This small loss of substance was remedied by epidermic graftings. Insensibility in the piece of flesh applied continued during six months. W. Vignal.

98. *Dunlap on Abdominal Section on a New-born Child.*—Dr. Dunlap, of Springfield, Ohio, recently operated on a healthy female child in whom the bowels, from the duodenum to the sigmoid flexure, lay, with the omentum, in a small sac formed by the tissues of the umbilical cord. The deformity was discovered at birth, and an attempt was made to reduce the intestines. The neck of the sac was enlarged, but the abdominal cavity was so contracted that it could not contain the intestines unless made larger. 'I therefore made an opening, commencing in the umbilicus, running up two inches, and then began stretching the walls of the abdomen with my fingers, then catching portions of the bowels and forcing them down into the cavity, while assistants, with hooks passed through the cut edges of the walls of the abdomen, held them firmly up. In about twenty minutes I succeeded in forcing them in and closing the wound with five sutures and ligatures to the cord close up to the natural skin.' No anæsthetic was given, and the infant did not show any signs of shock. A small teaspoonful of castor-oil was administered, and the bowels acted freely. One-third of a drop of tinctura opii was given five or six times. The child slept and suckled well, and was recovering when the case was reported. Dr. Dunlap asks 'how long after birth before the nerves of sensation are brought into action? They were certainly not in action when I performed this operation.' [This case was read before the Medical Society of the District of Columbia ten days after the operation, which partook of the characters of herniotomy and abdominal section at the same time. The earliest age at which ovariotomy has been performed is one year and eight months. Dr. Küster, of Berlin, was the operator, and the patient recovered.—*Rep.*]

Alban Doran.

99. *Reynolds and Watson on the Treatment of Stricture of the Urethra.*—In a clinical lecture by Dr. Henry F. Reynolds, of Chicago, published in the *Journal of the American Med. Association*, No. 2, 1888, it is stated that there are two classes of cases in which this affection is very liable to be met with. There are firstly cases with a history of continuous gleet for several months or years, preceded by one or more attacks of gonorrhœa, and secondly, those of retention of urine. Dealing here with cases of the first class, the lecturer points out that some contraction of the canal is almost a natural result of repeated and long-continued attacks of urethral inflammation, and that organic contraction, once fully established, naturally tends to keep up this inflammation. After a reference to the force and value of the theory, maintained by Dr. Otis, that the calibre of the healthy urethra always bears a given relation to the circumference of the penis, Dr. Reynolds proceeds to discuss the four principal methods of treating urethral stricture. By gradual dilatation, it is allowed, very many organic strictures may, in the course of several months, be enlarged to almost, if not quite, the normal calibre; but to this method are raised the objections of its slow process, its tendency to provoke reflex urethral troubles, and the fact that, in order to maintain the restored calibre, the occasional passage of a large sound is

afterwards necessary. By rapid dilatation or divulsion practised in cases of stricture seated in the posterior portion of the urethra, the tissues, owing to their more unyielding character, may be generally ruptured by this process, and the effect or result is then very similar to that of division by a cutting instrument. But in stricture in front of the scrotum, the tissues are not always ruptured during the process of divulsion, but are frequently stretched like India-rubber, and immediately come back after the tension of the instrument has been removed, leaving still some contraction. This, it is stated, is one of the principal objections to the rapid dilatation of stricture. With regard to electrolysis, Dr. Reynolds is of opinion that, though there are some very important objections to this as a scientific method of treating stricture of the urethra, it nevertheless has its merits, and is in suitable cases, to say the least, a very useful adjunct. It is an unquestionable fact that a larger instrument, if traversed by an electrolytic current, can be passed through a very small passage than could be done without the current, as it works by dissolving, as it were, the tissues. Owing, however, to the fact that with the use of a very large electrode the current becomes much diffused, and very little electrolytic action takes place, it is obvious that this, as a method for restoring the complete calibre of the urethra, is an imperfect one. On the other hand, it is, Dr. Reynolds thinks, the best method for enlarging a very fine stricture, as a preparatory or preliminary measure before resorting to the more radical method of divulsion or cutting. Internal urethrotomy, it is held, is the most radical method, and the best in all bad cases, and the best instrument that, in the opinion of Dr. Reynolds, has been devised for this purpose, is that known as the 'Otis divulsing urethrotome,' which can, as its name implies, be used for both divulsion and incision. The subsequent management of the case is as important for the ultimate success of the treatment as the operation itself. A full-sized sound should be passed every third or fourth day, until the completion of the healing process, which generally lasts from one to two months. At first, Dr. Reynolds states, the passage of this sound will cause a certain amount of pain, but it will be seen that by persistence in the use of it until the parts are thoroughly healed, the complete calibre of the urethra must be restored, and having once been restored in such a manner that there is no contraction remaining, there will very rarely be any subsequent relapse.

In a contribution to the *Boston Medical and Surgical Journal*, No. 26, 1887, Dr. F. S. Watson, of Boston, gives the following conclusions concerning the relative advantages of the different methods of treating urethral stricture :—(1) All strictures in the anterior five inches of the canal are best treated by internal urethrotomy, Dr. Otis's method yielding the best results. (2) Divulsion should be rejected as an operation for stricture, unless it can be shown satisfactorily that when carried sufficiently far it yields as permanent results in as many cases as internal urethrotomy. (3) Dilatation, where practicable, should be employed in cases of stricture beyond the first five inches of the urethra. (4) For strictures in this region not suitable for dilatation external urethrotomy should be selected, and not be reserved as an emergency operation only.

100. *Keen on the Healing of Operation Wounds.*—In a paper on the conditions conducive to the earliest possible healing of operation wounds read before the Surgical Section of the New York Academy of Medicine (*New York Medical Record*, No. 4, 1888), Dr. W. Keen, of Philadelphia, stated that these conditions are—1, the use of the antiseptic method before and during the operation, and at the later dressings ; 2, thorough drainage ; 3, complete approximation both of the edges and raw surfaces ; 4, the use of antiseptic dressings ; and, 5, absolute rest during the period of repair. Much stress is laid in this paper on the need of more thorough cleansing and disinfection of the site of operation during the twenty-four hours before operating, especially in localities in which dirt may accumulate, and in regions covered by hair. Dr. Keen is an advocate of a system of combined tubular and capillary drainage of large wounds. In drainage, it is pointed out, two separate objects are to be attained—firstly, to secure the escape of the more abundant, thicker, and coagulable wound-fluids of the first twenty-four hours ; and, secondly, to secure the escape of the less abundant, thinner, and practically non-coagulable later fluids. In order to fulfil these indications, a rubber fenestrated tube is used for the first twenty-four hours, and is afterwards replaced by capillary drains of horsehair, catgut, or rubber. In closing the wound, the edges of the skin should be brought together in exact contact, and it is held to be the surgeon's duty to put the sutures so close together that there shall not be the slightest gaping at any point. The deep-seated raw surfaces should be approximated either by pressure or by sutures. The former is theoretically the better method, but is often difficult of attainment in practice for mechanical reasons. When possible it should be employed, but, if not, then the surgeon may apply 'sutures of relaxation' so secured each at one end that the tension may be readjusted according to the needs of the case. Dr. Keen holds that it is necessary to dress the wound at the end of the first twenty-four hours, in order to remove not only the drainage-tube, but also the dressing that, by the presence of blood, has been rendered harsh and stiff, alike uncomfortable to the patient and unsuited to the wound, and presenting an unfavourable condition for speedy healing. The second dressing is usually allowed to remain for four or five days. Much importance is attached by Dr. Keen to the securing of absolute rest during the healing of the wound. After removal of the breast the arm on the side of the wound should be fixed to the body by a bandage or a strip of flannel, and in any but small wounds of the extremities, and also of the neck, suitable splints should always be applied. It is insisted that great care be used in removing the dressings. All sponging or syringing, it is urged, should be done efficiently but gently, and in the removal of the tubing, and, later, of the horsehair, it should be done slowly and carefully, the latter thread by thread. By careful attention to all these details, Dr. Keen very often has been able to secure the complete healing of a large operation wound in five days. In cases of excision of an ordinary tumour or of amputation it is his custom to assign ten to fourteen days as the maximum duration of active treatment, and he states that he rarely exceeds the greater, and most frequently secures the shorter limit. In his treatment of wounds Dr. Keen employs sublimate and carbolic acid in the usual way, but very rarely makes use of iodoform, on account partly of its very unpleasant odour, and partly of its inferior germicide properties.

101. *Beck on the Treatment of Fracture of the Patella.*—The last number of the *Beiträge zur Klin. Chir.*, edited by Professor Bruns, includes a contribution from Dr. Ernest Beck, of Tübingen, on the results, observed in most instances after long intervals, of different methods of treating fractured patella in twenty-eight cases of this injury. In one of these cases the fracture was compound. Of these twenty-eight cases, seventeen were submitted to bloodless methods of treatment. In five cases the injured limb was fixed by a simple splint and bandaging, in eleven cases the two fragments of the patella were brought together by means either of Malgaigne's hooks or of Bruns's screw, and in one case the 'tendinous suture' was applied. In describing the results of these different plans of treatment, the author excludes three of the seventeen cases, as he has not been able to obtain any recent information as to the state of the limb. In three cases, he states, there has been decided osseous union, and in three other cases the approximation of the fragments is so close and exact that it is difficult to determine whether the union be osseous or fibrous. In all the remaining cases there is a very short fibrous bond of union, which in no instance measures more than one centimètre in length. The functional results determined many years after the date of injury, in some instances after intervals of more than fifteen years, were found to be very good in all these cases. The limb could be fully extended in every case; in most cases the leg could be flexed to a right angle, in several to its normal extent, and in some few its movements in this direction were decidedly restricted. The full use of the limb, the author has made out from his observation, is restored very slowly, and not, as a rule, until from six to twelve months after the date of the injury. To these results are opposed those of the treatment of recent fracture of the patella by incision and suture, as shown by forty-five cases recently collected by Brunner, together with three cases reported in Beck's paper. In twenty of these forty-eight cases there was no fever during the after-treatment, and in eight cases there was a slight reaction. Intra-articular suppuration resulted in nine cases, in two of which amputation in the thigh was necessitated by suppuration and pyæmia. Death occurred in two cases, as a result, in one, of pyæmia, in the other, of carbolic acid poisoning. The union of the fragments was noted as osseous in eighteen cases, as firm in ten, in one case as apparently firm, and in five as fibrous. In seven cases there was ankylosis of the knee, and in five cases the mobility of the leg and locomotion were much impeded. From these statistics Dr. Beck draws the conclusion that, though in some cases of fractured patella firm union of the fragments and complete restoration of the functions of the limb may be attained in less time by osseous suture than by any of the bloodless methods, still the occasional occurrence of such bad results as ankylosis of the knee, and loss of the limb, and even of life itself, prove that the former method is by no means free from danger. That good results with regard to the restoration of the function of the limb may be attained by the bloodless methods of treatment of fractured patella, is shown not only by the cases recorded by Beck in this paper, but also by the results of the large experiences of Hamilton and Brunner. In conclusion, it is stated that incision and apposition of the fragments by suture can be regarded as justifiable only in those cases of fractured patella in which this injury is complicated by a wound of the soft parts.

102. *Zeller on the Surgical Treatment of Deep-seated Perirectal Abscess.*—In Professor Bruns's *Beiträge zur Klin. Chir.*, Band iii., Heft 2, Dr. Heinrich Zeller, of Tübingen, argues that perineal incision is the most rational and the proper method of opening a perirectal abscess situated above the levatores ani and coccygei muscles, and presenting a prominence and fluctuation within the rectum without forming any appreciable projection on the surface of the perineum. The perineal has, it is urged, many advantages over the rectal incision. The former permits a strict application of the antiseptic method, which, if the abscess be opened by the rectum, must be practised under very unfavourable conditions. In the perineal incision the abscess is opened at its deepest part, and so a free and ready discharge of the pus is favoured. The opening in the perineum can always be made to a sufficient extent, whilst when made in the rectum it will necessarily be limited on account of the risk of bleeding, and therefore is liable to be insufficient for the purpose of draining the abscess. The perineal incision guards against further rupture of the abscess in other directions, and should an urethro-perineal fistula be formed, this can be more easily dealt with than an urethro-rectal fistula. Moreover, the perineal incision has the important advantage of preventing a communication between the abscess and the interior of the intestine. In this contribution reference is made to seven previously recorded cases of perineal incision of deep perirectal abscess, and reports are given of three recent instances of similar treatment in the practice of Professor Bruns. In these ten cases the patients all recovered. In four cases urethro-perineal fistula had formed in consequence of rupture of the absess into the urethra before the perineal incision had been made. In each of these instances the fistula retarded the healing of the abscess, but at last was completely closed. In not a single case was the incision into the perineum followed by rupture of the abscess in any other direction. Of the subjects of thirteen collected cases in which the deep abscess was opened by the rectum, two died—one from purulent infection, the other from perforative peritonitis. The perineal incision has been made in some cases in the middle line of the perineum or in a line parallel to this; in others, in the line of the incision for lateral lithotomy; but, as a rule, its situation should correspond with that of the abscess. After the skin has been divided, the surgeon should make his way to the abscess more by the use of blunt instruments than of the knife, and every bleeding vessel must be secured. The depth of the wound, when the abscess has been reached, varies very much in different cases. In each of the three cases reported by the author it was about four inches; in some cases, especially when the abscess has descended, it is much less. If the diaphragm of the pelvis formed by the levatores ani and the coccygei has not been perforated, the surgeon must work to a depth of at least one inch and a quarter. If the abscess be large, it will usually be opened without any difficulty. If the incision be made at an early stage, and when the collection is small, the operation may be facilitated by the introduction of the forefinger of the surgeon's left hand into the rectum, so as to press

down the abscess towards the surface of the perineum, care being taken not to carry the knife too near to the gut. The relative position of the urethra to the abscess may be indicated by passing a catheter. After the discharge of the purulent contents, the surgeon should pass his finger into the cavity of the abscess, in order to search for any secondary cavities or prolongations. The cavity should then be washed out with some antiseptic fluid, and, after the introduction of a drain-tube, the seat of the operation should be carefully covered by a dressing of iodoform gauze.

W. Johnson Smith.

MEDICINE.

RECENT PAPERS.

103. Playfair.—On the Limitations of the so-called 'Weir-Mitchell Treatment.' (*Lancet*, January 1888, p. 8.)

104. Butlin.—On a Case of Traumatic Tetanus successfully treated by Large Doses of Salicin and Bromide of Potassium. (*Brit. Med. Jour.*, January 1888, p. 74.)

105. Spencer.—On the Antiseptic and Antipyretic Treatment of Phthisis. (*Brit. Med. Jour.*, January 1888, p. 184.)

106. Bucquoy, M.—On a Case of Farcy. (*La France Médicale*, Jan. 3, 1888.)

107. Luton, Dr.—On Cold of the Heart. (*Bull. Gén. de Thérap.*, Jan. 15, 1888.)

108. Vigouroux, Dr. R.—On Electrical Resistance as a Clinical Sign. (*Progrès Médical*, Jan. 14, 1888.)

Art. 103. *Playfair on the Limitations of the so-called 'Weir-Mitchell Treatment.'*—In the *Lancet*, January 1888, p. 8, Dr. Playfair draws attention to the limitations of the application of massage, and to the precautions which should be taken in selecting cases in which it should be applied. The author lays down the rule, subject possibly to a few rare exceptions, that it is unsuited to any form of organic disease. It is especially in some forms of obscure organic disease of the spinal cord that the mistake is often made of resorting to it, and Dr. Playfair goes as far as to say that there are cases which are impossible to diagnose until treatment has been tried; if they be due to functional disorder, a systematic treatment of massage will cure them; if they be organic massage avails nothing. Care should be taken never to apply this treatment in any marked case of mental disease; in cases of pronounced melancholia and other types of chronic insanity, it can do no possible good, and may even do harm. In conclusion, it is urged most strongly that massage must be carried out thoroughly or not at all. It is useless to modify it in any way by treating the patient at home, or by admitting friends, or allowing the patient to get up and go out. There is as much sense in doing this as in playing 'Hamlet' with the part of Hamlet left out. No doubt the question of expense is a strong temptation to adopt some modification, but the author's increasing experience confirms him in the opinion that thoroughness and completeness are absolutely essential to success.

104. *Butlin on a Case of Traumatic Tetanus successfully treated by Large Doses of Salicin and Bromide of Potassium.*—In the *Brit. Med. Jour.*, January 1888, p. 74, Mr. Butlin records the following case. A man, aged 26, of rather intemperate habits, cut his arm severely on June 30, 1887, by thrusting his hand through a window. The wound appeared to be making good progress until July 15, when he complained of pain in the epigastrium; in the course of the day symptoms of tetanus set in, and grew worse until July 19, when he was seen by Mr. Prior, of Norfolk. At this time the risus sardonicus was well marked, and spasm was elicited by speaking sharply or loudly to him. The patient was placed in a warm room, and full doses of chloral hydrate and bromide of potassium were administered; he, however, grew worse, and on July 22 appeared to be dying. At 1 P.M. a draught was given containing twenty grains of salicin and twenty of bromide of potassium. At 3 P.M. the dose was repeated, and again at 5 P.M., by which time the spasms were becoming less frequent, the pulse was improving, and severe perspiration set in. The medicine was repeated every two hours during the night, and on July 23 there was a marked improvement in his condition. The medicine was now given every four hours, and the improvement continued, but several days elapsed before he was free from pain in the epigastrium, and for nearly a fortnight it was necessary to draw off the urine. At the end of six weeks he was convalescent. Mr. Butlin remarks that it is difficult to assign to each drug its actual share in the cure, but suggests that the profuse sweating had something to do with the patient's recovery. The influence of the salicin was perhaps exerted on the vaso-motor centre, and its action as a germicide must not be overlooked.

105. *Spencer on the Antiseptic and Antipyretic Treatment of Phthisis.*—In the *Brit. Med. Jour.*, January 1888, p. 184, Dr. Spencer relates his experiences whilst using antiseptics and antipyretics in the treatment of acute phthisis. The practical outcome of these experiences are thus summed up. In the treatment and management of these cases one's aim should be to promote healing of the damaged lung-tissue, and this by means of fibroid substitution. To secure this, it is necessary to supply adequate nutrition for the anabolism of tissue and the storing of energy, both in the body generally, and in the damaged part in particular. Pyrexia must be treated as a general and constitutional state, by the use of quinine in doses sufficiently large to reduce the temperature. Next, the lesion must be brought under the influence of antiseptic remedies, both by internal medication (as by the use of iodoform) and by external applications (as by inhalations of eucalyptol). The application and influence of the antiseptic used should be complete, continuous, and prolonged.

Richard Neale, M.D.

106. *Bucquoy on a Case of Farcy.*—M. Bucquoy has treated in his wards the following interesting case of chronic farcy (*La France Médicale*, Jan. 3, 1888). The patient was a man of 46, who had suffered from abscesses in the muscles and areolar tissues in different parts of the body, during several months. The first of these abscesses proceeded from a suppurating wound in the hand, accompanied by angioleucitis and phlegmonous adenitis of the armpit. The patient grew thin, lost strength, and was feverish. Fresh abscesses appeared; the general condition became serious; the patient succumbed. At the necropsy a number of farcinatous abscesses were detected; there were two abscesses in the cranial cavity, one in the meninges, and another in the encephalon; the respiratory mucous membrane, which occupied the base of the tongue and glosso-

epiglottic folds, was ulcerated ; this last symptom is regarded by veterinary surgeons as characteristic of glanders. The patient had driven a horse from a stable in which several cases of glanders had occurred. While the patient was alive, Dr. Bucquoy made inoculations and cultivations with the virus. He found that asses resisted the action of this virus. M. Bucquoy regards this case as one of glanders, transmitted by a horse to a human being. The farcinatous character of the affection and its marked appearance were probably due to the quality of the virus, its mode of transmission, or the medium in which it developed. This case shows that farcy may be erroneously confounded with glanders.

W. VIGNAL.

107. *Luton on Cold of the Heart.*—A gorged condition of the heart is the salient symptom of an impression *a frigore*, which is manifested anatomically by inflammatory and plastic lesions. The clinical symptoms are painful spots over the chest, precordial anxiety, a sense of constriction, and a dry, fatiguing cough. The sequel of this condition is a muco-purulent catarrh of the bronchial tubes, which corresponds to the crisis of this indefinite ailment, which is then called a 'cold.' The effect of digitalis in aborting these attacks before they have reached this stage, shows clearly that the cardiac muscle is at fault.

108. *Vigouroux on Electrical Resistance as a Clinical Sign.*—It has been observed that the resistance is greater in the anæsthetic regions of hysterical women than elsewhere, and this fact suggested the employment of the measure of resistance as a clinical sign. The curious increase of resistance on the affected side in hysterical anæsthesia changes with the latter when this is transferred to the other side. This fact gives the skin a secondary *rôle* in the production of the phenomenon. The method employed is to compare the indications of the galvanometer during a given period of time with the same number of cells. This resistance varies greatly in different maladies. It is noticeable in hysterical subjects even apart from anæsthesia ; in spinal paralysis it is marked, while in exophthalmic goître it is diminished. The explanation is probably that the best conductors of electricity in the body are its liquid constituents. When, therefore, the resistance is increased, we may infer that the proportion of liquids is diminished. In other words, it may, with certain reservations, be taken as a test of the vaso-motor condition of the parts.

ALFRED S. GUBB.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

109. HUCHARD, DR.—On the Use of Salicylate of Magnesium in the Treatment of Typhoid Fever. (*Rev. Gén. de Clin. et de Thérap.*, Jan. 26, 1888.)

110. BAILLY, M.—On Chloride of Methyl as a Local Anæsthetic. (*Bulletin Médical*, Feb. 1, 1888.)

111. PARA, M.—On Intestinal Antisepsis in Typhoid Fever. (*Rev. Gén. de Clin. et de Thérap.*, Jan. 26, 1888.)

112. LABORDE AND HOUDÉ, MM.—On Colchicin in the Treatment of Gout. (*Rev. Gén. de Clin. et de Thérap.*, Dec. 29, 1888.)

113. OSSIAN-BONNET, DR.—On Antipyrin in the Treatment of Sea-sickness. (*Bull. de l'Acad. de Méd.*, Jan. 10, 1888.)

114. GRAHAM, DR. DOUGLAS.—On Local Massage for Local Neurasthenia. (*Journal of the American Medical Association*, Jan. 7, 1888.)

115. GAUCHER, DR.—On the Therapeutical Uses of Boracic Acid. (*L'Union Médicale*, Jan. 31, 1888.)

116. MARSON, M.—A New Test for Sugar in Urine. (*Bull. Gén. de Thérap.*, Jan. 15, 1888.)

117. TRAUB.—On Perchloride of Iron.

118. COLLEVILLE.—On Iodoform Vaseline for the Eruption of Small-pox.

119. MURRELL.—On Tablet Triturations. (*Practitioner*, December 1887, p. 417.)

120. CARTER.—On the Use of Colchicum in Gout. (*Birmingham Med. Rev.*, October 1887, p. 160.)

121. LAUDER BRUNTON.—On the Use of Strychnine as a Hypnotic. (*Practitioner*, January 1888, p. 28.)

122. HAIG.—On the Treatment of Migraine by Acids. (*Brit. Med. Jour.*, January 1888, p. 73.)

123. BOKENHAM.—On the Treatment of Migraine by Antipyrin. (*Practitioner*, February 1888, p. 99.)

124. GLINSKY, DR. A.—On the Therapeutics of Hæmoptysis. (*Transactions of the Kharkov Medical Society* for 1886, Vol. ii., p. 56.)

125. VERNEUIL, M.—Carbolic Acid Spray in the Treatment of Anthrax.

126. LABBÉE, M. E.—A new Tæniafuge.

127. JUHEL-RÉNOY.—Cold Baths in the Treatment of Typhoid Fever.

128. GAUCHER, JOFFROY, AND BLACHEZ.—On the Treatment of Diphtheria. (*Gazette des Hôpitaux*, Jan. 31, 1888.)

ART. 109. *Huchard on the Use of Salicylate of Magnesium in the Treatment of Typhoid Fever.*—This salt is easily prepared by dissolving salicylic acid in distilled water and saturating the boiling solution with carbonate of magnesium, when crystals of the salt may be obtained in needles, readily soluble in water and alcohol, and both colourless and odourless. Dr. Huchard gives it in doses of from 40 to 80 grains daily, and it is not contra-indicated by diarrhœa, since it is but slightly laxative even in large doses. It appears to act as an antithermic and as an intestinal antiseptic.

110. *Bailly on Chloride of Methyl as a Local Anæsthetic.*—Chloride of methyl liquefies under pressure, and plugs of cotton-wool, dipped into the liquid and placed in contact with the skin, produce such intense cold that the part immediately becomes white, hard, and insensible. By putting a little of the liquid in a specially prepared, double glass tube with a capillary tube at one end, the anæsthetic effects can be directed on to the most minute surfaces and regulated to a nicety. It is exceedingly efficacious as a local application for neuralgia and the like. It has been extensively used both for the relief of localised pain and as a local anæsthetic for minor operations.

111. *Para on Intestinal Antisepsis in Typhoid Fever.*—In an inaugural thesis, M. Para precognises the necessity for the internal use of antiseptics in typhoid fever. The antiseptic must be insoluble, and must be given in small doses. The most satisfactory material was found to be a mixture of naphthol and salicylate of bismuth (8 grains of each) in powder (half the quantity for children). Its administration should be preceded by a calomel purge (4 to 6 grains). Under this treatment the motions decrease in number, the abdominal distension becomes less, the sordes disappear, the tongue becomes moist, and both the liver and the spleen diminish in size.

112. *Laborde and Houdé on Colchicin in the Treatment of Gout.*—The effects of colchicin, the

active principle of *colchicum autumnale*, in the prevention and relief of gout, are said to be more constant and more reliable than the crude drug. To avert a threatened attack they give, as soon as the first symptoms are manifested—on the first day, 3 granules, each containing 1 milligramme ($\frac{1}{66}$ grain) at intervals of two hours; the second day 2 granules, and the third day 1 granule. These doses will generally suffice to cut short an attack, but, if necessary, another dose may be given on the fourth day. It is equally beneficial in cases of well-marked gout, where the symptoms have declared themselves, the same method of dosage being followed, beginning with 4 granules. Several days must be allowed to elapse between each series of granules.

113. *Ossian-Bonnet on Antipyrin in the Treatment of Sea-sickness.*—Having had his attention called to the effects to be obtained from the administration of antipyrin, M. Bonnet undertook a round trip to Buenos Ayres on board an emigrant ship, in order to test its influence on sea-sickness. On the voyage he was enabled to observe its effects in fifty-seven cases, which convinced him of the benefit to be derived from its use in such cases. He advises travellers to take a saline purgative for a day or two before embarking, to be repeated on board, accompanied or not by emetics, if the sickness be severe and persistent. When the *embarras gastrique* has been got rid of, antipyrin will check further symptoms. He gives it in doses of from 50 centigrammes to 1 gramme (8 to 16 grains) hypodermically. In only one case did it fail to afford immediate relief when from 15 to 25 grains had been given, the dose depending on the violence of the symptoms and the age and vigour of the patient. The drug can, if desired, be given by the mouth.

114. *Douglas Graham on Local Massage for Local Neurasthenia.*—Neurasthenia is a malady which is rarely found among those who are engaged in active manual or intellectual occupations, the strain on the faculties and muscles preserving their tone and integrity. This active exercise, which is indicated in the treatment of persons suffering from neurasthenia, requires an effort of nerves and muscles which they are not equal to, and it is to supply this want that massage may be advantageously employed. In cerebral exhaustion the relative value of massage is less, and outdoor exercise is the desideratum; but the two may be usefully resorted to concurrently, daily massage of the head alone being preferable. Patients who suffer from uneasy sensations in the lumbar or dorsal region as a consequence of brain work, inducing insomnia, are often relieved, and sleep procured by local massage. In writers' cramp and the laryngeal cramp of singers local massage has yielded excellent results. Dr. Graham concludes:—1. That massage induces sleep. 2. That even when massage is applied in the forenoon its soporific effects may not disappear before bedtime, though in general the later in the day massage is used for promoting sleep the better. 3. Disagreeable feelings of drowsiness and languor do not necessarily intervene between massage in the forenoon and sound sleep at bedtime. Aptitude for rest or work generally follows massage. 4. When people are wakeful after massage they may not be restless nor feel the loss of sleep on the following day. 5. Spinal irritation is relieved or disappears under massage. 6. For local neurasthenia there is no need of general massage, unless the whole system be secondarily influenced. 7. When affections have come to a standstill under massage, improvement may yet go on after massage has been discontinued. 8. For improving the nutrition of nerves and muscles, restoring natural sensation and motion, massage may succeed when other means have failed. 9. Deep massage without friction has proved of more value in my hands than all other forms of massage put together in the cases herein considered. 10. Massage can be overdone, producing opposite effects from a moderate application. 11. Besides massage, carefully graduated exercises at regular times are valuable accessories in the restoration of motion. 12. Massage is not the only means of treatment for neurasthenia. Its selection is usually decided upon after the failure or exhaustion of every other means; in the same manner that the shrewd old divine decided that it was not wise to let the devil have all the good times to himself.

115. *Gaucher on the Therapeutical Uses of Boracic Acid.*—Boracic acid is practically non-toxic, the quantity required to kill an adult man being several consecutive doses of $2\frac{1}{2}$ ounces. It is extremely useful in the treatment of impetigo, the more so as it is both odourless and colourless. The scabs should be removed by means of poultices and solution of boracic acid in glycerine of starch (1 in 10) applied. In over a hundred cases a cure resulted within ten days. M. Gaucher also succeeded in effecting a cure of a case of tuberculosis of the skin by the same means. He has given it in 10 grain doses to patients suffering from pulmonary tuberculosis with advantage. Boracic acid is eliminated easily and rapidly by the urine and is indicated as an internal medicine in the cystitis of old men.

116. *Marson on a New Test for Sugar in Urine.*—Dissolve 10 centigrammes of pure ferrous sulphate in 8 cubic centimètres of urine by the aid of warmth; add 25 centigrammes of caustic potash, and boil. A dark green precipitate forms if sugar be present, and the supernatant liquid is reddish brown or black, according to the amount of sugar. When sugar is absent, the precipitate is greenish-brown in colour, and the liquid is colourless.

117. *Traub on Perchloride of Iron.*—To prepare a reliable soluble saccharide of iron M. Traub recommends the following process:—Dissolve 100 grammes of perchloride of iron in 500 grammes of water. In another vessel dissolve 85 grammes of bicarbonate of sodium in 500 grammes of water. Mix the solutions, collect and dry the precipitate, which is then ground down with 100 grammes of powdered sugar, previously mixed with $1\frac{1}{2}$ grammes of caustic soda dissolved in 3 grammes of water. The mixture is dried in a stove and powdered.

118. *Colleville on Iodoformed Vaseline for the Eruption of Small-pox.*—Dr. Colleville, of Rheims, recommends the use of iodoformed vaseline to obviate the irritation and inconvenience of small-pox eruption on the face. His formula is as follows:—Pure vaseline, 40 parts; iodoform (powder), 2 parts; camphor (powder), 4 parts misce.

Alfred S. Gubb.

119. *Murrell on Tablet Triturations.*—In the *Practitioner*, December 1887, p. 417, Dr. Murrell contributes an interesting article on the subject of tablet triturations. During a recent visit to America the author visited the manufactory of Messrs. Wyeth, of Philadelphia, and was shown the whole process of preparing the series of preparations now becoming so well known under the name of 'Compressed Tablet Triturates.' Dr. Lauder Brunton defines tri-

turation as being 'intimate mixtures of substances with sugar of milk.' In the United States Pharmacopœia the following directions are given for their preparation :—'Take of the substances ten parts, sugar of milk in moderately fine powder ninety parts, to make one hundred parts; weigh the substance and the sugar of milk separately, then place the substance, previously reduced if necessary to a moderately fine powder, into a mortar, add about an equal bulk of sugar of milk, mix well by means of a spatula and triturate them thoroughly together. Add fresh portions of the sugar of milk from time to time until the whole is added, and continue the trituration until the substance is intimately mixed with the sugar of milk and finely comminuted.' Dr. Murrell has used several of these preparations, and gives his experience of their value. The tablets containing one minim of tincture of aconite are of great value in tonsillitis, pharyngitis, bronchial catarrh, coryza, rheumatism, and even in gout. The value of aconite in minim doses every five or ten minutes is well known in the early stage of many inflammatory affections, and the use of these compressed tabloids enables us to give the dose required with minute accuracy. The tabloids containing one-hundredth of a grain of perchloride of mercury are useful in many forms of diarrhœa, especially when the stools are slimy, offensive, and mixed with blood. Dr. Murrell gives one tabloid every quarter of an hour for the first hour, and subsequently hourly for five or six hours, or until symptoms are relieved. The tabloids containing one-third of a grain of grey powder, given every hour, are useful in many forms of dyspepsia, and also in infantile diarrhœa accompanied by vomiting and the passing of offensive watery motions. In the treatment of syphilis these mercurial tabloids are most valuable. One of the most useful tablet triturates is that containing one-tenth of a grain of sulphide of calcium, for boils, carbuncles, abscesses, suppurating scrofulous glands, &c. The tincture of nux vomica triturates, each containing one minim, have proved most efficacious in the treatment of obstinate constipation, and are also useful in dyspepsia and the vomiting of pregnancy. A most excellent laxative compound compressed triturate is one containing a fifth of a grain of aloin, a sixteenth of a grain of strychnine, an eighth of a grain of extract of belladonna, and a sixteenth of a grain of ipecacuanha. The use of these preparations generally deserves a trial by all medical men.

120. *Carter on the Use of Colchicum in Gout.*—In the *Birmingham Med. Rev.*, October 1887, p. 160, Dr. Carter contributes an article on the value of colchicum in gout. The author does not consider that the drug is able to limit or control the formation of the *materies morbi* of the disease, in the same way that the salicyl compounds control the poison of acute rheumatism; he inclines to the view that the palliative effects of colchicum are mainly traceable to its action as a vascular depressant. In early attacks of acute gout, occurring in plethoric subjects, colchicum gives relief almost directly by lessening the general blood-pressure and relieving the circulation in the inflamed joint. Colchicum does not, however, act in this way on all inflammations; the pain in the early stages of gout is severe out of all proportion to the local inflammatory changes, and it is known that the relief afforded by colchicum is in inverse proportion to the amount of local inflammatory mischief, and for this reason it is far less applicable in chronic than in acute gout. The author draws the following conclusions from his paper. Colchicum should be avoided in all cases attended with debility and cardiac feebleness; and that its use should be confined to early attacks of a sthenic type, and a pulse of distinctly high tension. Also from the liability to depress the system, and to interfere with renal elimination, its administration should not be continued for a longer period than is absolutely necessary for the relief of pain. The drug should be given in moderate doses, repeated at short intervals rather than in a large single dose. Since there is no evidence to show that colchicum has any curative influence, but rather that, in spite of the relief afforded, it tends to encourage recurrence, it is safer to avoid its use altogether when possible, and under no circumstances should a patient be allowed to resort to the drug except under medical supervision.

121. *Lauder Brunton on the Use of Strychnine as a Hypnotic.*—In the *Practitioner*, January 1888, p. 28, Dr. Lauder Brunton contributes an article on the use of strychnine as a hypnotic. The cases in which this treatment succeeds best are those of persons engaged in literary work and who suffer from want of sleep in spite of feeling tired. The condition of these patients is one of over-tiredness, and it occurred to the author that by bringing the depressed nervous system up from the condition of over-fatigue to that of simple fatigue, sleep would be obtained. By giving these cases a dose of the tincture of nux vomica of from 5 to 10 minims, or about $\frac{1}{200}$ of a grain of sulphate of strychnine, excellent results were obtained. The dose should be repeated if the patient wakes one or two hours afterwards. In this class of case narcotics, such as opium, chloral, &c., are objectionable, as they prevent the sufferer from having all his wits about him on the following day. In some cases sleep to a certain extent can be obtained by giving some warm beef-tea, or a teaspoonful of Valentine's meat juice in warm water, or a little alcoholic stimulant taken at bedtime.

122. *Haig on the Treatment of Migraine by Acids.*—In the *Brit. Med. Jour.*, January 1888, p. 73, Mr. Haig, M.B., contributes a short article on the treatment of migraine by acids. The author understands by the term migraine, a headache due to the presence of excess of uric acid in the blood, and an excess is present in the urine during the headache. The principle of this treatment is to stop this excess of uric acid in the urine and in the blood by giving large doses of some mineral acid. It is not of much consequence which acid is used, the only point is that the dose must be sufficiently large, especially if, as is often the case, the headache is going on during the 'alkaline tide' of digestion. The dose recommended is forty to sixty minims of dilute nitro-hydrochloric acid in a tumbler of water, one-half to be taken at once, and the rest in thirty or forty minutes; the headache is generally much better within an hour, and quite gone within an hour and a half. If the urine be alkaline or very slightly acid before the treatment is begun, or if the patient should have previously been taking alkalies, a third dose of twenty minims may be necessary. An equivalent dose of citric acid taken as lemonade, will do as well, or any other acid provided it raises the acidity of the urine. It is also possible to reverse the process, and by giving alkalies to bring the head-

ache on or increase it. The above refers entirely to the treatment of the paroxysm; a diet without butcher's meat, beer, wine, &c., is the best preventive treatment. If acids properly and carefully given fail to relieve, the headache is not migraine due to uric acid; and if the urine be tested, probably no uric acid will be found corresponding to the headache. A large number of drugs reported useful in migraine really act as acids, increasing the acidity of the urine and diminishing the formation of uric acid. Some others probably act like the bromides by quieting the nerve-centres, and preventing their reacting to the irritant in the blood; but as compared with bromides, the treatment by acids is more satisfactory in that it removes the irritant from the blood and leaves the nerve-centres intact for other processes.

123. *Bokenham on Antipyrin for Migraine.*—In the *Practitioner* of February 1888, p. 99, Mr. Bokenham states that during the last two months he has treated a number of cases of migraine with complete success, by giving antipyrin in doses of three or four grains. As soon as symptoms of the attack come on, he gives a dose of three grains of antipyrin, and repeats it in about half an hour. Generally two doses are sufficient to procure relief. In cases of epilepsy, the author suggests the trial of a dose of ten grains of antipyrin immediately the aura is felt. If the theory of Dr. Liveing concerning the close pathological relation between migraine and the other so-called paroxysmal neuroses be true, there is some hope that in both these diseases we may be able to check or to cut short the attack by the timely use of antipyrin. The practice of most physicians is to employ this drug in doses of fifteen grains, but a further trial of administering the drug in smaller doses is most desirable.

Richard Neale, M.D.

124. *Glinsky on Sulphate of Atropia in Hæmoptysis and Menorrhagia.*—Following the recommendation of Dr. Tacke, of Wesel (*vide* the London Medical Record, April 1881, p. 148), Dr. A. Glinsky, house physician to the Alexandrovsky Town Hospital, in Kharkov, tried (*Transactions of the Kharkov Medical Society* for 1886, Vol. ii., p. 56) the subcutaneous injection of sulphate of atropine in three severe cases of hæmoptysis, in one of which the patient, suffering from interstitial pneumonia of the left upper lobe, had been for some time before his admission incessantly expectorating enormous quantities (several basinfuls a day) of blood mixed with viscid sputa and foam. Ergot (both internally and hypodermically), Haller's elixir and hydrastis Canadensis having been employed without the slightest benefit for about two days, on the third morning $\frac{1}{120}$th of a grain of atropine was injected. Hæmoptysis ceased at once, but recurred at nightfall, to disappear as promptly after another similar injection, and never to return again. (The man was discharged after a five days' treatment by the injections, repeated twice daily, but he has remained under Dr. Glinsky's observation ever since. How long exactly he has been free from hæmorrhage is not stated.) Atropine proved as successful in the cases of two other patients, one of whom was suffering at the time from putrid bronchitis with croupous pneumonia, and another from chronic phthisis. The same treatment was resorted to with the best results in a case of menorrhagia (extremely profuse flow of twelve days' duration every month). The injections were commenced on the second day of menstruation, to be rapidly followed by a complete stoppage of the hæmorrhage. The hæmostatic effects of the alkaloid were ascribed by the author to its powerful action on the vaso-constricting nerves of all internal organs of the body (as established by Professor Albertoni's experiments). [In the *Vratch*, No. 40, 1881, p. 675, Dr. M. Rosenhart—and not Dr. Agapitoff, whose name is mentioned in Dr. Glinsky's paper—details his striking case, referring to a phthisical offspring of a phthisical family, aged 20, in whom, after a slight hæmoptysis of about three months' standing, there suddenly occurred a truly enormous pulmonary hæmorrhage, 'the patient literally (!) swimming in his blood ejected with every effort to cough.' It was arrested, though with extreme difficulty, by the internal use of a saturated solution of chloride of sodium (two half-glassfuls, with an interval of ten minutes), Haller's elixir, and digitalis with ergot, and by absolute rest. Two days later, however, the bleeding returned with its former violence. The application of ice to the chest only intensified both hæmorrhage (and cough), which was to some degree controlled for a while by the means employed on the first occasion. A subsequent hypodermic injection of Bonjean's ergotine on the next morning did not prevent a sudden increase of the bleeding to its former formidable intensity. It was under these desperate circumstances that Dr. Rosenhart resorted, as to a 'last resource,' to Tacke's remedy, and injected one-sixtieth of sulphate of atropine under the skin. In about half an hour the bleeding completely ceased, and the cough was considerably lessened. To prevent any cough irritation the author prescribed also two one-third doses of opium, to be taken during the night. On the next morning another injection of one-sixtieth, and on the third morning a third one of one-hundredth of a grain of the sulphate were made. As before, opium was given simultaneously four times per diem. Not a drop of blood was lost after the first dose of the alkaloid. Cough disappeared completely in about six days, while the general state of the young man soon improved so considerably as to allow him to undertake a long journey to a health-resort in the Crimea, whence, nearly four weeks later, he informed Dr. Rosenhart that he was enjoying complete immunity from any hæmoptysis. It would be very interesting to hear something about Dr. Tacke's remedy from clinical experts.—*Rep.*] V. Idelson, M.D.

125. *Verneuil on Carbolic Acid Spray in the Treatment of Anthrax.*—At the Académie de Médecine, M. Verneuil lately described the excellent results he had obtained with carbolic acid spray in cases of furunculi and carbuncle. He employs a 2 per cent. solution of carbolic acid. The pulverizer is placed at a distance of 25 to 50 centimètres from the skin. In the case of small or middle-sized tumours, Collin's small pulverizer may be employed, but a large pulverizer is more efficient in the case of large tumours. The vertex of the tumour is surrounded with a roll of linen in order to preserve the adjoining regions from the irritating action of the acid. The spray is applied three or four times a day, from twenty to thirty minutes at a time. In the intervals the carbuncle is covered with a carbolic acid compress. This method is infallible in the case of small or middle-sized furunculi. It arrests their development, and in the case of voluminous furunculi, often renders surgical intervention superfluous. In every instance it soothes

the pain which accompanies the evolution of carbuncle and furunculi.

126. *Labbée on a New Tæniafuge.* — M. E. Labbée recommends the following formula as an excellent tæniafuge. For adults, 40 or 50 centigrammes of sulphate of pelletierine are dissolved in an ordinary syrup. For children, from 8 years upwards, this quantity is reduced to 25 or 30 centigrammes. This remedy must not be administered to children below the age of 8. It is well to add 50 centigrammes of powdered tannin to the mixture above prescribed. The evening before taking this remedy the patient should only take a little milk. An injection should be administered at bedtime. The mixture should be administered early the next morning; the patient should remain in a horizontal position in order to avoid vertigo. A quarter of an hour after taking the mixture, he should swallow 30 grammes of brandy, or an infusion with 10 to 15 grains of senna. Castor-oil (30 grains) and sulphate of soda have proved equally efficacious. The tapeworm is usually expelled in three or four hours.

127. *Juhel-Rénoy on Cold Baths in the Treatment of Typhoid Fever.*—At a recent meeting of the Société Médicale des Hôpitaux, M. Juhel-Rénoy stated that he had treated forty-three cases of typhoid fever with cold baths. Only three of the patients succumbed; sixty-five baths were administered to each patient. The existence of typhoid fever was placed beyond a doubt in every instance. M. Juhel-Rénoy considers that cold baths prevent hæmorrhage, pulmonary complications, and syncope, modify the diarrhœa, and clear the urine, which becomes abundant. Among the patients he treated there were pregnant women, hysteric, alcoholic, and tuberculous patients. M. Juhel-Rénoy believes that this form of treatment offers no dangers excepting in cases of perforation of the intestines and peritonitis, in which it should never be employed. M. Dujardin-Beaumetz remarked that M. Quinquaud had proved that cold baths increase organic combustion, and consequently the production of caloric. He admitted that cold baths may act as a tonic, but the same result is obtained with tepid baths, which do not offer the same dangers; the increased arterial tension produced by cold baths may cause sudden death in cases where there is cardiac weakness. Moreover, Brand's method is painful, and could not be employed at the hospitals, where typhoid patients are only received on the seventh day after the illness has appeared. M. Féreol has tried this method with unsatisfactory results. He will not affirm that it does not offer certain dangers. M. Hayem stated that he had obtained analogous results to those described by M. Juhel-Rénoy with cold applications, wet cloths, tonics, alcohol, &c. Brand's method was founded on the belief that hyperthermia was the cause and not the consequence of this affection, which is a specific infectious disease. Until a specific remedy is found for typhoid fever, M. Hayem considers it more prudent to adhere to the treatment usually prescribed.

128. *Gaucher, Joffroy, and Blachez on the Treatment of Diphtheria.*—At a meeting of the Société Médicale des Hôpitaux, on Jan. 28, M. Gaucher read a paper on the treatment of diphtheria by removing the false membranes and cauterising the throat with a concentrated solution of carbolic acid. He dissolves 5 to 10 grammes of carbolic acid in 10 grammes of alcohol, and adds to this mixture 15 to 20 grammes of camphor and a small quantity of oil. M. Gaucher has obtained excellent results with this treatment in two cases. M. Joffroy stated that he employed chloral as a local application for diphtheria. This substance has more powerful antiparasitic properties than carbolic acid. M. Joffroy washes the throat with a 2 per cent. solution of chloral. He then applies a one-fifth solution to the false membranes, which disappear. The throat remains ulcerated; the application of the solution is continued. By this means diphtheritic angina is transformed into erythematous angina. This treatment cannot be applied to children. M. Gaucher stated that he had tried chloral, but had found carbolic acid more efficacious. M. Blachez believes that false membranes may be destroyed in a less painful manner with paraffine oil. In many cases the false membranes continue to develop in the larynx after they have been removed from the throat. M. Gaucher remarked that the special object of his treatment was to destroy the false membranes in order to prevent secondary infection. M. Richard stated that the addition of one-half per cent. of tartaric acid rendered carbolic acid much more antiseptic.

W. Vignal.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

129. Bell.—On a Case of Meningitis and Hemiplegia following Labour. (*Indian Med. Jour.*, October 1887, p. 203.)

130. Apostoli.—On some New Applications of the Induced or Faradic Current in Gynæcology. (*Brit. Med. Jour.*, January 1888, p. 63.)

131. Cameron, Dr. J.—On the Influence of Leukæmia upon Pregnancy and Labour. (*International Journal of the Medical Sciences*, January 1888.)

132. Sinclair, Dr.—On Two Cases of Rupture of the Sac in the Earlier Stages of Tubal Pregnancy. (*Brit. Med. Jour.*, January 1888, p. 127.)

133. McNaught, Dr.—On a Case of Ruptured Extra-uterine Gestation. (*Brit. Med. Jour.*, January 1888, p. 129.)

134. Page, Dr.—On a Case of Hysterico-Melancholia following Suppression of the Menses. (*Obstet. Gazette*, December 1888.)

135. Schuhl, Dr.—On a Case of Molar Pregnancy with Albuminuria. (*Rev. Méd. de l'Est*, Jan. 1, 1888.)

136. Boardman, Dr. C. V.—On a Case of Puerperal Tetanus. (*Jour. American Med. Association*, December 1887.)

137. Webb, Woodham W., M.D.—On Fibroid Tumours of the Uterus. (*Canadian Medical Record*, November 1887.)

138. Boissarie.—Uncontrollable Vomiting in a Non-pregnant Woman cured by Dilatation of the Os Uteri. (*Annales de Gynécologie et d'Obstétrique*, October 1887.)

139. Gaston, Dr. J. McF. (Georgia, U.S.).—On Cauterising the Ovarian Pedicle. (*Albany Medical Annuals*, January 1888.)

140. Hochstetter, Dr.—On Spontaneous Gangrene of both Extremities after Childbirth. (*Wiener Med. Wochensch*, No. 3, 1888.)

Art. 129. *Bell on a Case of Meningitis and Hemiplegia following Labour.*—In the *Indian Med. Jour*, October 1887, p. 203, Mr. Howard Bell records an interesting case of a lady, aged 26, who

was delivered on August 21 of her first child. The labour was natural and easy, and everything went on perfectly well until the morning of August 25, when she complained of headache. This remained more or less constant until August 29, when the pain became intense, but was paroxysmal. She was nursing the child, and seemed well in every other respect. A dose of bromide and choral was given at bedtime, but had no effect. Next day, August 30, the pain was as severe as ever, and bromide was given every four hours, but no sleep was obtained. On August 31 the paroxysms of pain were very acute in spite of bromide, chloral, and camphor every three hours. On September 1 she became very drowsy, breathing was laboured, and there was constant jactitation of the limbs. About 2 P.M. the tongue was observed to be protruded to the right side; the angle of the mouth on the right side was lower than the left; the right pupil was dilated, and the right arm powerless and cold. Unconsciousness became complete, deglutition gradually became impaired, the pulse grew feeble, breathing became stertorous, and death took place at 8 P.M. on September 2. Cases of paralysis after labour and terminating fatally are rare. Very few authors mention any cases, though Churchill describes thirty-five cases of paralysis occurring either before, during, or after labour. Primiparæ are most subject to this paralysis, and the right side is generally affected. [In the *Medical Digest*, sects. 1273 : 5 and 1287 : 1, many similar cases may be found.]

130. *Apostoli on some New Applications of the Induced or Faradic Current in Gynæcology.*—In the *Brit. Med. Jour.*, January 1888, p. 63, Dr. Webb has translated a paper by Dr. Apostoli, of Paris, on the employment of the faradic current in gynæcology. M. Tripier was the first to try this method some twenty-five years ago, but Dr. Apostoli has modified some of his methods, and has endeavoured to counteract some of the exclusive views entertained by M. Tripier. Dr. Apostoli teaches that the faradic current is all-powerful in relieving the early and purely mechanical forms of congestion of the uterus, but it is useless in chronic forms and in lesions of the mucous membrane—that is, in endometritis. In cases where the mucous membrane is only at fault there is nothing for the induced current to work upon, but in these cases the methodical application of the continuous current is of great service. Tripier originated the unipolar excitation of the uterus, in which the circuit was always closed upon the abdomen, but Apostoli substituted the bipolar method. This is done by using a sound, which contains the two poles side by side, permitting closing of the circuit within the uterus itself. This method is simple, easy, and less painful than Tripier's, and, by enabling one to use additional intensity, the cure is hastened. Apostoli always employs what he terms the faradic 'current of tension.' This current acts less on the muscular contractility and influences the sensibility. It is in the treatment of endometritis that the faradic current of tension is most useful, and, where possible, the intra-uterine bipolar method should be used; but in cases of pregnancy, virginity, or in an acute stage of peri-uterine inflammation, the vaginal bipolar method must be employed. The length of the sitting should last until the pain has diminished or disappeared. This will vary during the course of the applications, but is always of longer duration at the commencement of the treatment. The author insists that though a case of perimetritis may only find relief, the ovarian neuralgic pain may be, and generally is, done away with in a very short time. The sittings should follow each other quickly—every day, or even twice a day. In cases of simple neuralgia, two to five sittings generally give relief for some months. With inflammations the case is different, the result being sometimes delayed for a long while. In a case of perimetritis the current must be used very weak at first, and only increased according to the tolerance of the patient; but in operating for ovarian pain, when the uterine region is healthy, the current may be pushed from the commencement. Special attention is drawn to the value of this treatment in cases of imperfect vaginismus. Some patients have intense and very localised sensibility about the entrance and lower part of the vagina. In many of these cases Dr. Apostoli has obtained excellent results from the application of the induced current to the painful spot by means of an instrument specially designed by him, in which the two poles are contained side by side in a conical end, but separated by an insulating layer of gutta-percha.

131. *Cameron on the Influence of Leukæmia upon Pregnancy and Labour.*—In the *International Journal of Medical Sciences*, January 1888, Dr. James Cameron records a case of leukæmia of peculiar interest. The patient, aged 36, was first under Dr. MacDonnell's care in 1885 for leukæmia. She had been pregnant six times, and a living child had been born each time. These children were all living in September 1885, but were subject to attacks of jaundice. In 1882 the patient emigrated from England to Montreal. Menstruation had commenced at 14, with intervals sometimes prolonged to six weeks, but she never lost much at each period. She married at 22, and never suffered pain at a period until three years ago. Since then she suffered much pain in back, pelvis, and groins. A splenic tumour was noticed in 1884 at the beginning of her sixth pregnancy. Since marriage there have been occasional attacks of jaundice, ushered in by chills, vomiting, and slight abdominal pain; occasional attacks of epistaxis have occurred since childhood. For the last three years there has been loss of flesh, but in the intervals of the icteroid attacks she is fairly well, though weak. When seen by Dr. Cameron in October 1886 there had been about a week previously a sudden attack of vertigo, causing her to fall to the ground, where she remained unconscious for half an hour. Ever since her head had ached, and she was admitted into hospital on October 8 suffering from vomiting, dyspnœa, and epistaxis. She was in her seventh month of pregnancy, with marked œdema of face, feet, and legs, varying according to position. Splenic dulness was eleven inches in the oblique measurement; hepatic dulness, six inches. Blood pale and watery-looking, hæmoglobin very pale, red corpuscles small, the proportion of white to red being 1 in 10. After this she had repeated attacks of epistaxis and diarrhœa; the dyspnœa and œdema became rapidly worse, till at last she could not lie down at all, and could only get a few snatches of sleep when in the knee-elbow position, or propped up in a chair. She grew so weak that her condition became very alarming, and it was with great difficulty she was moved to the Maternity Hospital on Oct. 29. Soon after her arrival there, however, labour pains came on. In about three hours the

liquor amnii came away, and with it the child. Not a drop of blood was to be seen. By means of friction and pressure the placenta was removed an hour and a half afterwards; not a drop of blood was even then seen or afterwards. The patient made a good recovery. A thin, watery fluid could be squeezed from the breasts, but there was never any tension or flow of milk. The child was a female, born on the 214th day from the cessation of menstruation; weight, 4½ pounds; apparently strong, slept well, and sucked vigorously from a healthy breast. The day after its birth, however, the mother clandestinely put the child to her own breast. It sickened at once and died from vomiting and purging on the fourth day. When the patient left the hospital on the twelfth day the percentage of blood-corpuscles was W: R = 1:35. In April 1887 she again became pregnant, and in July the splenic tumour was again becoming marked. The corpuscles were counted, and it was found that W: R = 1:3. The grandmother, mother, and brother of patient all suffered from symptoms of leukæmia; the children had all more or less signs of enlarged spleen and a tendency to leukæmia.

132. *Sinclair on Two Cases of Rupture of the Sac in the Earlier Stages of Tubal Pregnancy.*—In the *Brit. Med. Jour.*, January 1888, p. 127, Dr. Sinclair records the following interesting cases:—1, During the greater part of 1880, a patient, multipara, was under treatment for an enlarged uterus, with retroversion. In November she did not menstruate, and in December she had symptoms of pregnancy. On Jan. 1, 1881, she was taken suddenly ill, with faintness and pain in the bowels; she sank rapidly and died in the evening before the author saw her. On making a *post mortem* examination, the abdomen was found full of blood; there was a tubal pregnancy apparently of about six weeks' duration; the sac was near the middle of the left Fallopian tube; and the orifice, from which blood oozed, was on the posterior surface, so that there was a free opening into the pelvis. The uterus contained several fibroid tumours projecting on the serous surface, the largest of them about the size of a walnut. This case made a deep impression on the author, and he determined to operate next time he met with a similar case, as the second example will show. A patient about thirty-five years of age, multipara, after menstruating regularly for more than twelve months from the birth of the last child, missed two menstrual periods. On Feb. 13, 1887, the patient 'believes she caught cold.' On Feb. 15 she hurried to catch a train, after a hasty tea. Hardly was she seated in the carriage when she was seized with a 'sudden terrible pain, paleness, vomiting, and faintness.' She was conveyed home almost immediately, and her abdomen was found to be greatly distended. Next day the pain and faintness continued, and the temperature had risen to 101° F. Under the influence of morphine, the pain diminished, but returned suddenly on the morning of Feb. 17, when a clot of blood was passed by the vagina. More morphine was given and the pain abated, but on the morning of the 19th, four days from the first onset of symptoms, the pain came on suddenly, causing the patient to become completely collapsed. During the day she rallied, but the author diagnosed the case to be one of rupture of a tubal pregnancy, and decided to operate late in the evening of Feb. 19. As soon as the peritoneum was reached, it was evident that there was a black liquid behind. When incised, an enormous quantity of blood spurted out, several handfuls of clots were cleared out of the pelvis, and at the end of the right Fallopian tube was found the ruptured sac, with very active hæmorrhage going on from its interior. The tube and ovary were ligatured and removed in the ordinary way. No embryo was ever seen. It was impossible to wash away all the extravasated blood from the abdominal cavity, but all the blood within reach was washed out by means of a warm saline solution—common salt, about ½ per cent. A considerable quantity of the fluid was left, a Koeberle's tube inserted, and the wound closed in the usual way. The patient soon recovered from the operation, and made a good recovery. On March 1 she menstruated as usual, and on March 3 the last piece of drainage-tube was removed. In June the author heard she was quite well.

133. *McNaught on a Case of Ruptured Extra-uterine Gestation.*—In the *Brit. Med. Jour.*, January 1888, p. 129, Dr. McNaught records a case of ruptured extra-uterine gestation, successfully treated by abdominal section. The patient was thirty-four years of age, had been married ten years, had never been pregnant, and had menstruated regularly up to two months previously. At 3 P.M. on July 21, while passing water, she was suddenly seized with severe pain at the lower part of the belly, and fainted; she was seen at 6 P.M. by the author, and had fainted several times in the meanwhile. Dr. McNaught found her pale and almost pulseless, but she was able at times to tell him she suspected she was pregnant, and complained of pain at the lower part of the abdomen. On examination the uterus was found pushed down generally and fixed, and on the left side a distinct bulging was felt, pushing down the vagina. The following day she had somewhat recovered, and in consultation with Dr. Green the diagnosis of ruptured extra-uterine gestation was made. The patient not being in a position to afford sending to Manchester for a specialist, Dr. McNaught decided to perform abdominal section with the assistance of Dr. Green. An incision was accordingly made, and the abdominal cavity was seen to be full of blood. In the right Fallopian tube, half an inch from its junction with the uterus, was found a swelling, the size of the yolk of an egg, and at the back, facing Douglas's pouch, there was an opening into it, partially filled with blood-clot, admitting the tip of the little finger. A double ligature was applied on each side of this, and it was excised. The abdominal cavity was washed out with hot water, the wound closed without a drainage-tube, as there was not a suitable one handy, and dressed with Gamgee's tissue. By help of stimulants the patient was enabled to recover from the shock of the operation, but for some days she suffered from severe vomiting and abdominal pain; on the fifth day the lowest stitch was removed, the edges of the wound which were adherent were drawn apart, and the peritoneum, which had united, scratched through; a good deal of perfectly odourless bloody serum escaped and the abdominal cavity was washed out with a warm, weak solution of perchloride, and a large drainage-tube inserted to the bottom of the pelvis. After this everything went on well, the tube was withdrawn on the ninth day and the stitches removed on the twelfth day. A fortnight after the operation she was sitting up, and was able to return home at the end of the fifth week. The author trusts that this successful result may encourage others who practise in the country

to undertake abdominal section rather than wait until it is too late for any chance of success.

Richard Neale, M.D.

134. *Page on a Case of Hysterico-Melancholia following Suppression of the Menses.*—The patient was a girl, 16 years of age, well developed, anæmic, and of a lymphatic temperament. Her mother suffered from *petit mal*, and her father was a high-strung, nervous man. Two children of the family were weak-minded. She had menstruated fairly well for two years. In June, during a menstrual period, she took a cold bath, after a long, hot walk, upon which the flow abruptly ceased. She suffered from headache and invincible drowsiness for a few days, but this passed off. She did not menstruate in July, and she repeated her imprudent conduct when menstruation returned in August, this time with severer consequences or sequelæ. She then had headache, constipation, insomnia, and was very irritable and depressed in spirits. In about twenty-four hours more she began to express alarm on two accounts. First, that she had lost her moral character, been guilty of self-pollution, was certain she was going deranged, and knew that she would finally either destroy herself, or that, as the easiest way to come back to paths of virtue, she must starve herself to death. Secondly, she professed to have the greatest fear that she would be taken to a lunatic asylum—just as she knew had been the case with two of her near relations. This state of mind—depressed and full of fancies and delusions, a hopeless outlook from her own standpoint—continued for about five weeks. There was no distinct or pronounced mania, except for about three days, during which nourishment and medicine had to be administered by force. She was ordered ergotine and bromide of sodium in full doses, with massage, and due attention to hygiene and surroundings. She gradually recovered in the course of two months, but apprehensions are felt as to the return of the symptoms.

135. *Schuhl on a Case of Molar Pregnancy with Albuminuria.*—Madame G., 31 years of age, of good general health, was married seven years previously. Her first pregnancy was in 1883, and terminated by the birth of a male child at seven months, still living. On admission she was pregnant for the second time, the last menstrual period being at the end of February 1887. Towards the third month of pregnancy she had some hæmorrhage from the uterus, unaccompanied by pain, and lasting for two days. Thenceforward the hæmorrhage recurred almost daily, but was never very abundant. Towards the end of the third month she had an attack of hæmoptysis. At 3½ months œdema of the face, legs, and abdomen, manifested itself with headache, visual troubles, and frequent attacks of epistaxis. The urine was loaded with albumen. She was admitted to the hospital on June 17. She was kept in bed, on account of the uterine hæmorrhage, which persisted for six weeks. She was put on a milk diet, and was ordered tannin in pills. The fundus of the uterus was then a finger's breadth below the umbilicus, the uterus being larger than is usual at the fourth month of pregnancy. The uterine *souffle* was well marked, and nothing abnormal could be detected *per vaginam*. She left the hospital on July 7, better in health, but still albuminuric. On the 13th the œdema had augmented and become general. The following day she complained of lumbar and abdominal pain, and in the afternoon there was copious hæmorrhage, accompanied by the expulsion of several hydatidiform vesicles. A few hours later the hæmorrhage returned, and the vagina was plugged with antiseptic cotton-wool. In a quarter of an hour the plug was expelled with a mole the size of a fœtal head at term. A spongy mass could still be felt through the dilated cervix. An injection of warm water was followed by the expulsion of a second mass of hydatids, consisting of the centre of the ovum, as was evident from the presence of the amnion. The placenta came away soon after; it was thickened and of a dull red colour. The albumen in the urine gradually diminished, and disappeared in the course of a fortnight. The uterine hæmorrhage continued to some extent, and at the beginning of September a sharp flooding took place with a further discharge of vesicles. When the patient was examined on Oct. 31, the uterus was normal in size and position, but she still complained of a sanguineous discharge.

136. *Boardman on a Case of Puerperal Tetanus.*—The patient, a married woman, pregnant for the second time, felt the first pains of labour on March 15. At 8.30 A.M. on the following day Dr. Boardman was sent for, and found her suffering acutely and anxious for aid. The child's hand and arm were presenting, and the uterus was firmly contracted on the shoulder, rendering version impossible. This had been brought about by numerous doses of ergot administered by the midwife. After consulting with the friends of the patient, embryotomy was decided upon. The patient was therefore put under the influence of ether, and, after two hours' hard work, the child was removed, far advanced in decomposition. The uterus contracted well, and the patient said she was quite comfortable. On the following evening she was feverish and restless, with a quick pulse and some abdominal tenderness. Dr. Boardman was asked on this occasion to visit a man in the next room who was suffering from erysipelas, but he insisted instead on the man being at once removed to a hospital. This could not be done, but he was put in another part of the house and carefully isolated. On the 18th the patient was evidently suffering from puerperal fever, which ran its course in the course of a few days, and convalescence had set in, when in the evening of March 23 she complained of stiffness of the jaws and a partial inability to open the mouth. There was pain in the back of the neck and considerable muscular rigidity. As the patient was of a hysterical temperament it was hoped that this condition would soon pass off. The symptoms, however, rapidly increased in severity, and death resulted on March 25. No *post mortem* examination was allowed. The cause of the tetanus was obscure. There had been no exposure to cold, and the most absolute cleanliness had been enforced.

Alfred S. Gubb.

137. *Woodham Webb on Fibroid Tumour of the Uterus.*—Dr. Webb gives a clinical history of three cases of fibroid tumours of the uterus treated by electrolysis, on Apostoli's method. Galvano-puncture was resorted to in all three of the patients, as the sound could not be passed. One was a very large tumour, reaching to the sternum. The treatment in each case was most successful, the patients losing their symptoms. The tumours became very much reduced in size, and a restoration to health ensued. The number of applications of the current varied from fifteen in one instance to thirty-eight in another,

spread over a period varying from twelve to eighteen months. J. Inglis Parsons, M.D.

138. *Boissarie on the Cure of Uncontrollable Vomiting in a Non-pregnant Woman by Copeman's Method.* Dr. Boissarie noted an important paper published ten years ago in the *British Medical Journal* by Dr. Copeman, who advocated gentle dilatation of the cervix by means of the forefinger as a remedy for the uncontrollable vomiting of pregnancy. [A valuable contribution by Dr. Graily Hewitt on the same subject was published in the *Transactions of the Obstetrical Society of London*, vol. xxvi., 1884.—*Rep.*] Dr. Boissarie tried the same treatment in a woman, aged 37, married five years, but sterile. She had been subject, after suffering for a long period from various hysterical symptoms, to constant attacks of vomiting which lasted for two months and reduced her to a state of extreme emaciation. From Feb. 5 to April 5 the vomiting occurred daily without intermission. On April 5, Dr. Boissarie introduced the first phalanx of his forefinger into the canal of the cervix and dilated it—a difficult proceeding, as the cervix was long, conical, and tough, and the os internum could not be reached. For two days the vomiting ceased. The digital dilatation was repeated twice, the second date being April 12, after a severe attack of vomiting. The patient never vomited again, though at the next period, at the end of April, she felt nausea. She slowly gained flesh, and at length grew quite well.

139. *Gaston on Cauterising the Ovarian Pedicle.*—In removing a large ovarian tumour, Dr. J. Gaston, of Atalanta, Georgia, tied the pedicle with silk and then divided it by means of the Paquelin cautery. The patient did well. The peritoneum was closed by catgut sutures. The superficial sutures used to unite the abdominal wound were of iron-dyed silk. [That there can be any advantage in employing the cautery, instead of the scissors or knife, is doubtful. —*Rep.*] Alban Doran.

140. *Hochstetter on Spontaneous Gangrene of both Extremities after Childbirth.*—Dr. Hochstetter reports in the *Wiener Med. Wochensch.* the case of a young woman, twenty-four years old, whose father had suffered from diabetes mellitus, and who herself, as a child, had exhibited scrofulous symptoms, otherwise healthy. She gave birth on Jan. 11 to a child. She remained in bed for four weeks, on account of great weakness, caused, it was thought, by loss of blood. There is said to have been no fever. After having been out of bed for six days, she had, on the night of Feb. 15, pain in the right leg, and found that the leg was swollen and the toes blue. Though the pain soon ceased, the swelling quickly extended up to the pelvis. On the third day blisters appeared on the foot and calf. On being admitted to hospital, she was found to be a strongly built and well-nourished woman. There was considerable œdema of the entire lower extremity, the toes, ball, and back of the foot being of a bluish black colour, running into a bluish red higher up. There were several blisters on the back of the foot and on the calf. No pulse could be felt in the popliteal and femoral arteries. There were no venous cords. The appearance and general condition of the left extremity were normal, as were also the lungs, heart and urine. Evening temperature, 30°. During the first few days the gangrene of the right foot showed a line of demarcation beneath the malleoli. On March 4 the patient complained of pain in the left leg, which was found to be blue and without feeling up to the knee, but not œdematous. The pulse of the femoral artery could scarcely be felt. No hard venous cords. During the following days the whole extremity as well as the external genitals and the lower part of the back and the epigastrium became strongly œdematous. Palpation of the pelvis showed that there was increased resistance, particularly on the right, indicating probable internal œdema. The cutaneous veins of the epigastrium were clearly perceptible. The left femoral pulse was no longer to be felt. The line of demarcation of the gangrene of the left lower extremity formed during the following days in front at the knee-joint, stretching up in tongue shape at the back for about one decimètre higher. The temperature remained steadily a little higher than the normal. On March 27, for the first time, albumen was discovered in large quantities in the urine, the test with ferrocyanide of potassium yielding a thick sediment, in which there were no cylinders. For five days the reaction remained the same. On April 1 and 2, the urine remained perfectly clear after the addition of acetic acid and ferrocyanide of potassium, but again from the 3rd to the 6th there was a pronounced albumen reaction. Again, on the four following days there was no reaction, while on the 11th and 12th there was a copious precipitation of albumen, which again disappeared for ten days. On April 22, 23 and 24 there was a slight turbidity, but after the 25th no trace remained of albumen. From April 13 the patient vomited several times every day, and her strength failed rapidly. After the urine had remained normal for several days, amputation could be done. The right leg was amputated just above the malleoli, and the left in the middle of the thigh. On account of the œdema, the Esmarch bandage had hardly any effect. Hence it would be well in such cases to apply it twice—the first time with a view to displace the œdema, and the second time in the hollow thus produced, with a view to compressing the arteries. The arteries spurted, although the lumen of each was narrowed. During the three days following amputation, traces of albumen reappeared in the urine, but afterwards completely disappeared. The course of healing was on the whole normal, the patient recovering very quickly and becoming too lusty, in consequence of which she had attacks of vertigo, determination of blood and nervousness. The œdemata disappeared slowly. As yet no pulse could be felt in the femoral arteries. The most interesting features in this case were the comparatively late appearance of circulating disturbances, namely, five weeks after delivery; the absence of primary venous thrombosis during the puerperal state; further, the successive occurrence of thrombosis of both femoral arteries at an interval of seventeen days; and lastly, the intermitting albuminuria.

From an anatomical point of view, the most natural explanation of the course of the case is to assume that the thrombosis began in the right uterine artery and then extended to the right hypogastric and external iliac arteries, thus causing gangrene of the right foot; that then the thrombosis developed up to the point of division of the aorta; then, either by obliterating the lumen of the left common iliac artery, or by an embolus, produced gangrene of the left lower extremity; and lastly, caused albuminuria by ascending in the aorta to the point of departure of the renal artery, thus occasionally blocking the openings of those arteries.

John Elliott.

PHYSIOLOGY.

RECENT PAPERS.

141. Atwater.—On a Fish Diet. (*Zeitschrift für Biologie*, 1887, Heft 1, p. 16.)

142. Hoffmann.—On the Fate of certain Ferments in the Organism. (*Arch. für die gesammte Physiologie*, Band xli., p. 148.)

143. Richet.—On the Weight of Animals (Expériences sur le Poids des Animaux). (*Arch. de Phys. Norm. et Path.*, s. iii., t. x., No. 8, p. 473.)

144. Neilson, H. I.—On the Administration of Chloroform (On the Observation of the Pupil as a Guide in the Administration of Chloroform). (*Journal of Anat. and Phys.*, vol. xxii., part ii., p. 154.)

145. Haycraft, J. B.—On Fibrin Ferment (An Account of some Experiments which show that Fibrin Ferment is Absent from Circulating Blood). (*Journal of Anat. and Phys.*, vol. xxii., part ii., p. 172.)

146. Geppert.—On the Influence of Alcohol on the Intermutation of Gases in Man. (*Archiv für experimentelle Pathologie und Pharmacologie*, xxii., No. 17, and *Centralbl. für die gesammte Therapie*, November 1887.)

147. Gréhant.—The Physiological Effects of the Gases resulting from Incomplete Combustion of Coal-gas. (*Comptes-rendus de la Société de Biologie.*)

148. Saint-Martin, L. de.—On the Influence of Anæsthetics on Respiratory Function. (*Bulletin Biological Society*, Dec. 24, 1888.)

149. Petit, Léon.—Case of Pulmonary Tuberculosis Transmitted to a Cat by Human Sputa. (*Journal de Médecine*, Jan. 1, 1888.)

150. Dujardin-Beaumetz, Dr.—On the Diagnostic Value of the Presence of Hydrochloric Acid in the Gastric Juice. (*L'Union Médicale*, Jan. 26, 1888.)

151. Gaucher, Dr.—The Etiology of the Large White Kidney. (*L'Union Médicale*, Jan. 17, 1888.)

Art. 141. *Atwater on a Fish Diet.*—During a period of three days, a strong student, of 79 kilogrammes weight, was fed on the flesh of a shell-fish (melanogrammus æglefinus). Besides this he partook of butter, vinegar, Worcestershire sauce, and salt. Beer, wine, coffee, and a small quantity of brandy were permitted. The daily consumption, at three meals, of flesh averaged 1,548 gr., containing 45·6 gr. of N., which were brought up by the wine and beer to 46·6 gr., of which 44·07 were re-obtained from the urine, 0·93 from the fæces, making a total of 45·0 gr. For comparison, fourteen days later a similar three days' experiment was made with 1,200 gr. daily of lean beef. Including the beer and wine the daily consumption of N. amounted to 39·38 gr. Of this 38·15 were re-obtained, 37·18 from the urine, 0·97 from the fæces. There was a daily absorption of 8 gr. of albuminous substances as opposed to 10 gr. on the fish diet. The absorption of fat was more considerable in the case of the meat than in that of the fish (59 gr. per diem as opposed to 35 gr.). It is concluded that fish with some substance poor in N., such as potatoes, will form a fair and cheap diet, possessing about the same value as lean, but not as fat meat.

142. *Hoffmann on the Fate of Certain Ferments in the Organism.*—The inquiry was undertaken with the assistance of Professor Grützner into the fate of the alimentary ferments. Pepsin was found, as by other observers, to depend upon the consumption of food; in the normal morning urine more was found than in that passed after a full meal. On the contrary, the diastatic ferment was in greater quantity after a meal. The author believes that normal urine never contains trypsin, and that the portion which is not destroyed in the intestines, but taken up by the blood, is destroyed chiefly by the liver, but also in the spleen and kidneys, and he shows that a small quantity of trypsin placed in normal urine rapidly becomes altered, so that, if any escaped the kidneys, it would perish in the urine itself. After ligature of the pancreatic duct, however, large quantities of trypsin appear in the urine.

143. *Richet on the Weight of Animals.*—If a living animal be placed in a sensitive balance it will be found to lose rapidly a certain part of its weight. The object of the author in this research has been to investigate the questions opened up by this fact. After describing the balance which he employed (*see* London Medical Record, Jan. 15, 1887, p. 48), and the experiments which he undertook, he sums up his results as follows. Every warm-blooded animal loses every instant a certain quantity of its weight; this loss is continuous, the augmentation by food on the other hand being intermittent. The causes are the loss of water by the expired air and of carbonic acid, though the oxygen gained nearly compensates for the latter. Everything which accelerates the respiration, such as violent exercise, or a full meal, increases also the loss of water from the lungs; this is consequently, like the elimination of carbonic acid and the absorption of oxygen under the control of the medulla. The loss of water is much more considerable in birds than in animals. It is not so much of importance as a means of elimination of water, as of a source of cooling. The more rapidly an animal respires, the more rapidly it cools and loses weight. The medulla, which excites the respiratory movements, is more or less active, according to the amount of carbonic acid and oxygen in the blood, and also according to the temperature of the external median, and thus, through the respiration, controls the temperature of the body.

144. *Neilson on the Administration of Chloroform.* This paper is based on the author's experience in administering chloroform in the Royal Infirmary, at Glasgow, and on a series of experiments on dogs. His conclusions are as follows:—1. The effect produced by chloroform on the pupil is at first dilatation, varying in degree and duration, then contraction, as the narcosis becomes profound, and dilatation again when the sensibility is returning. If the administration be still continued, with the pupil strongly contracted and motionless, the pupil will also dilate, but in this case more suddenly and completely, and will be coincident with a state from which it will be difficult or impossible to resuscitate the patient. This latter is the dilatation of asphyxia. 2. So long as the pupil dilates in response to excitation by pinching, &c., the patient is not sufficiently narcotised for the operation to be proceeded with, unless the latter is slight, and does not require complete anæsthesia. 3. When the pupil becomes strongly contracted and immobile, no more chloroform should be given until it begins to dilate again. If, then, further anæsthesia be required, a little more chloroform should be given, till the pupil again contracts. 4. The occurrence of sickness causes dilatation similar to, but more sudden than, that which happens when sensibility is returning, and the efforts of vomiting have the effect of arousing the patient.

145. *Haycraft on Fibrin Ferment.*—The results of the author's experiments are thus summarised. 1. Blood does not tend to coagulate within the body,

and when it clots within a cup it is not because it is then withdrawn from influences which restrain its coagulation, but because the surface of the cup induces it to clot. 2. No free ferment is found within circulating blood-plasma, and probably white blood-corpuscles do not break down in the blood-vessels under normal circumstances. Their dissolution is probably entirely in glandular structures. 3. White corpuscles probably are not constantly breaking up even in the glands, inasmuch as blood may be retained for so long a time surrounded by paraffin in a fluid condition, showing that their life-history is not so short as was supposed. 4. If injected blood-ferment disappears from the circulation, it is because it is destroyed in glands or eliminated from the system. 5. Solid matter induces coagulation by causing some change in the white corpuscles, leading to the setting free of fibrin-ferment, which previously had either remained stored up within them, or which they produce spontaneously when in contact within the foreign matter.

Bertram C. A. Windle, M.A., M.D.

146. *Geppert on the Influence of Alcohol in the Intermutation of Gases in Man.*—Dr. Z. Geppert describes his experiments and analysis which he carried out for the purpose of investigating the influence of alcohol on the intermutation of gases in man, of which the following is a summary. Of four men, of the same age and weight, and of similar constitution, of whom one was not accustomed to alcoholic drinks, two were moderate drinkers, and one an habitual drinker; after taking alcohol, the total quantity of the expired air of each was measured, and of this a certain volume was submitted to a quantitative analysis for its contents of carbonic acid and of oxygen. The doses of alcohol employed in the several experiments varied from 30 to 75 cubic centimètres. 'No perceptible effect on the inhalation of oxygen was evincible; a computable plus or minus of oxidation could not be determined for the human organism.' It seems that alcohol in man behaves like any other nutrient. A portion of the available oxygen which otherwise would serve for the oxidation of other substances is used for the burning of the alcohol, and other substances are hereby saved.

Ferd. Adalb. Junker, M.D.

147. *Gréhant on the Physiological Effects of the Gases resulting from Incomplete Combustion of Coal-gas.*—The *Comptes-rendus de la Société de Biologie* publishes a communication from M. N. Gréhant on the physiological effects of the gases resulting from incomplete combustion of coal-gas. M. Gréhant placed in a narrow chamber of 12 cubic mètres capacity a Bunsen burner, which he lighted in such manner that the combustion of the gas took place underneath and produced acetylene. While the combustion was taking place he prepared the carotid artery of a dog, from which he extracted some blood in a normal state which contained 44·2 cubic centimètres of carbonic acid, 19·5 cubic centimètres of oxygen, per cent. A ligature was then applied to the central (?) end of the artery, and a little water was injected into the glass tube fixed in the artery, so as to be able later to withdraw some more blood without a clot being formed. The animal was then left in the chamber. At the end of forty minutes the confined air had the disagreeable and very pungent smell which characterises acetylene; the dog lay down on its side; at the end of an hour and twenty minutes later the animal barked plaintively and became unconscious; it was then killed, and a second sample of blood being drawn from the carotid gave the following analytical result:—30·3 cubic centimètres per cent. of carbonic acid, 6 cubic centimètres of oxygen. Further chemical operations showed that this considerable diminution of oxygen was due to the presence of 20 cubic centimètres per cent. of oxide of carbon in the blood. This experiment proves conclusively that the quantity of oxide of carbon given out by a Bunsen burner, burning from below during two hours, in a chamber of 12 cubic mètres capacity, is sufficient to almost completely oxycarbonise the blood and endanger the life of an animal exposed to its effects.

148. *Saint-Martin on the Influence of Anæsthetics on the Respiratory Function.*—M. L. de Saint-Martin has made researches on the influence of anæsthetic sleep upon the activity of respiratory combustion. He declared that the results of these researches were in direct opposition to those arrived at by Paul Bert, who in his 'Lectures on the Respiration,' published in 1870, affirmed that during anæsthetic sleep, produced by chloroform, the quantity of oxygen in the blood increases. M. de Saint-Martin, by his recent experiments, showed that during anæsthesia the proportion of oxygen in the blood diminishes, while the proportion of carbonic acid increases. M. de Saint-Martin evidently ignores the fact that P. Bert arrived at a similar conclusion from his later researches in 1885, and that he then asserted that the oxygen in the arterial blood diminishes progressively, while the carbonic acid increases during anæsthetic sleep produced by chloroform. M. de Saint-Martin further described the different variations which occur in the quantity of carbonic acid expelled from the lungs during anæsthesia. Paul Bert likewise gave a description of these variations in 1885, in which he showed that the quantity of carbonic acid produced, diminishes progressively during anæsthesia, while the quantity of oxygen absorbed, decreases in the same manner. He proved that the proportion of $\frac{CO^2}{O}$ gradually diminishes.

149. *Petit on a Case of Pulmonary Tuberculosis transmitted to a Cat by Human Sputa.*—Dr. Léon Petit, at the Société de Médecine Pratique, lately described a curious case of pulmonary tuberculosis transmitted to a cat by human sputa. M. L. Petit has already observed two cases of tuberculosis transmitted to dogs by human beings. The cat described by M. Petit was in the habit of devouring the sputa of consumptive patients. This taste had become quite a passion with the animal, which followed the patients about, waiting for them to expectorate; it used to devour the tuberculous sputa which had served for microscopical examination in M. Petit's laboratory. After a time the following symptoms were observed:—The animal grew thin; its hair stood erect; the eyes were blear; a mucous purulent secretion escaped from the nostrils. There were attacks of sneezing and coughing, followed by vomiting. Koch's bacillus was detected in the secretion from the nostrils, which apparently proceeded from the bronchial tubes. At the end of 2½ months a complete change took place. The morbid phenomena were modified. The animal appeared about to recover. She had 7 kittens, one of which she nursed for 5 months, during which time she presented no symptoms of cachexia. A slight, dry cough persisted. Six months after the kittens were born the cat was killed. At the necropsy the fol-

lowing phenomena were detected :—The lower parts of both lungs showed signs of congestion. The pulmonary tissue was incised; a small quantity of light, mucous, sanguinolent fluid escaped. There was a collection of small, hard, cretaceous lumps in the lower part of the lower lobule, which gave a rough surface to this region. These little islets, which were of a greyish hue, were surrounded by a dense pale tissue. There were no lesions in the apex or pleura. The peritoneum, intestine, mesenteric ganglia, kidneys, and liver, were normal. Microscopical examination revealed alveoli in the indurations above described. These alveoli were filled with filaments which contained swollen and deformed epithelial cells. Ehrlich's process revealed the presence of a number of large bacilli collected at the periphery near to the hepatic region. A few tuberculous bacilli were found in the mucous sanguinolent fluid which exuded from the small bronchial tubes. The tuberculous nature of the affection was unmistakable. Pregnancy had caused the return of appetite, and a consequent improvement in the condition of the animal. M. L. Petit believes that had the cat lived the improvement would have continued, and recovery would have ensued. It is admitted that the organisms of dogs and cats resist the introduction of tuberculosis. It is therefore probable that they are equally refractory to the evolution of the disease.

W. Vignal.

150. *Dujardin-Beaumetz on the Diagnostic Value of the Presence of Hydrochloric Acid in the Gastric Juice.*—At the last meeting of the Académie de Médecine, of Paris, M. Dujardin-Beaumetz contested the assertion of M. Germain Sée and others as to the diagnostic value of the presence or absence of free hydrochloric acid in the gastric juice in distinguishing between cancerous and other affections of the stomach. He maintained that hydrochloric acid was often absent in many other affections besides cancer, and said, moreover, that its presence was not inconsistent with the existence of cancer.

151. *Gaucher on the Etiology of the Large White Kidney.*—By successive subcutaneous injections in guinea-pigs, of various extractives, resulting from the incomplete oxidation of nitrogenous matter in the organism, M. Gaucher has produced the characteristic lesions of that form of Bright's disease known, *post mortem*, as the large white kidney. He infers that the accumulation of these substances in the blood sets up irritation in the kidney in the course of elimination, and gives rise to a genuine parenchymatous nephritis. This accumulation is often the consequence of hepatic disease, but may accompany many chronic maladies. Even in health the ingestion of quantities of substances rich in extractives, such as beef-tea, beef-extracts, &c., may determine injurious effects on the kidney. The excess of extractives in the blood may thus be due either to their defective elimination or to their exaggerated production. The practical application of these data lies in the indication afforded by them for the diet of albuminuric patients. Beef-tea is nothing less than a poison for persons suffering from Bright's disease, since the extractives intensify the renal irritation and aggravate the symptoms. Further, seeing that in all chronic forms of disease nutrition is interfered with, principally in the direction of the imperfect oxidation of nitrogenous matter, any addition to the stock of poisons is injurious and to be avoided.

Alfred S. Gubb.

PATHOLOGY.

RECENT PAPERS.

152. Symington.—On Alterations in the Position of the Liver. On certain Physiological Variations in the Shape and Position of the Liver. (*Med. Chir. Soc. Edin.*, Dec. 7, 1887.)

153. Budin.—On a Tumour of the Umbilical Cord. ('Note sur une Tumeur du Cordon Ombilical.' *Archives de Tocologie*, vol. xv., January 1888, p. 41.)

154. Macewen, Dr. W.—On the Osteogenic Factors in the Development and Repair of Bone. (*Annals of Surgery*, October and November.)

Art. 152. *Symington on Alterations in the Position of the Liver.*—The first part of this paper is devoted to a description of the true shape of the liver, only of recent years fully recognised. The observations as to the alterations in position of the viscus were chiefly made upon two children, in one of whom the stomach was empty and contracted, in the other it was moderately full. The bodies were frozen and sections made of them. The author concludes from his observations that distension of the stomach causes certain definite alterations in the position and shape of the liver. The movement of this viscus is a complicated one, but may be roughly described as a rotation round a vertical axis passing through the inferior vena cava. The portions of the liver that undergo the greatest displacement are the left lobe and the anterior part of the right lobe. It is interesting to note, in connection with this, how the relations of the peritoneum facilitate this movement. Thus, the whole of the anterior surface of the liver and the corresponding part of the abdominal wall are covered by peritoneum, while the left lateral and suspensory ligaments of the liver are long mesentery-like folds. As to the function of the suspensory ligament, he concludes that when the stomach is empty the ligament is relaxed and thrown into a number of folds; as the stomach fills, the anterior surface of the liver glides over towards the right side, and the ligament ultimately becomes tense, and thus tends to check excessive movements of the liver. The round ligament and the left lateral ligament are associated with the suspensory ligament in confining the movements of the liver within a certain range. In the fœtus the stomach is empty, or nearly so, and it is fortunate that this is the case, for a dilatation, by pushing over the liver to the right side, and consequent bending of the umbilical vein, would be very apt to obstruct the supply of arterial blood to the fœtus. While the left lobe and the anterior part of the right lobe are very mobile, certain other portions of the liver undergo little or no change in consequence of distension of the stomach. The author has been able to obtain no evidence of any change in the position or direction of the inferior vena cava. If there is any change in the position of the Spigelian lobe, it is a very slight one. The surface of this lobe lies in contact, save for a double layer of peritoneum, with the diaphragm, and looks backwards and inwards. It is possible that it looks a little more inwards when the stomach is distended. The posterior surface of the liver lying to the right of the inferior vena cava and above the kidney being uncovered by peritoneum, and united directly to the diaphragm by rather firm connective tissue, cannot move to any appreciable extent. It is probable that the gliding

of the anterior surface of the liver towards the right side is associated with a corresponding backward movement of the right surface. There are, however, no markings on this surface to assist us in determining whether or not this is the case. Whether the stomach be empty or full, the liver always retains its general form, which is that of a triangular prism. The transverse diameter is, however, considerably diminished, and the vertical extent on the right side increased by a distension of the stomach. This increase in a vertical direction is what one would naturally expect from the compression of a plastic mass like the liver, placed between a distended stomach and the right lateral wall of the abdomen.

153. *Budin on a Tumour of the Umbilical Cord.*—This paper contains an account of the extremely rare condition mentioned in the heading. Case 1, published by M. Seuvre in 1874.—The tumour in this case was situated on the side of the cord at 8·0 centimètres from the umbilicus, was about the size of a hen's egg, and moderately distended by about 30 grammes of a yellowish, slightly turbid, and viscid fluid, which pressure did not displace. The umbilical vein traversed the cavity and was here very tortuous, and surrounded by a glutinous, colloid, yellowish substance (a kind of liquefied Whartonian jelly). Case 2, previously unpublished.—Specimen sent to M. Budin by Dr. Hautraye. The tumour was taken from the cord at the birth of the mother's fourth child, which was born at full term, well developed, and healthy. It was placed 20·0 centimètres from the umbilicus, and was about the size of a large human thumb. Its surface was smooth and nodular, its colour a yellowish green. It contained a considerable quantity of blood, so that it shrank considerably when the cord was cut. It presented, on opening it, three cavities. The first of these was rough internally, and contained a kind of chocolate-coloured pulp, which adhered to the walls and resembled broken-down liver substance. The second contained a substance like white of egg, and similar to that which flows from a voluminous cord when cut. The third was full of a viscid matter resembling the vernix caseosa of the child. Neither vein nor arteries of the cord communicated with any of the cavities. Microscopically examined, the wall of one cavity was found to be lined with squamous epithelium covering a fibrous layer, in which were sebaceous glands, hairs, and hair follicles. In another cavity, besides similar structures to the first, there were villi like those of the intestine, and covered in parts with a layer of columnar cells. In this cavity there were also, in the deeper parts of the wall, tubular and acinose glands with quantities of smooth muscular fibres. In the third cavity the surface was covered by columnar epithelial cells, some of which were ciliated. In the thicker parts of the tumour there was found adipose tissue, smooth muscular tissue, vessels, nerves, cartilaginous nodules, and fragments of bone. The author remarks that the anatomical composition of this tumour quite resembled that of the cystic tumours of the ovary and testicle, which are sometimes of a dermoid, sometimes of a mucous, or of a mixed type. Such tumours may be described as teratomata.

BERTRAM C. A. WINDLE, M.A., M.D.

154. *Macewen on the Osteogenic Factors in the Development and Repair of Bone.*—In the *Annals of Surgery* of October and November, Dr. W. Macewen, of Glasgow, has published the results of some inquiries concerning the relations which the periosteum bears to bone, and the osteogenic part performed by the various structures in development and in repair. It has been proved, the author states, by observation and experimental inquiry, that the periosteum is not the potent osteogenic factor which many believe it to be, but that the soft tissues enclosed in the osseous tissue play the chief *rôle* in the development and reproduction of bone. Several interesting cases are here recorded in support of the following propositions:—1. When the periosteum has been mechanically detached from an extensive area of an adult healthy bone and replaced after the lapse of some hours, union between the bone and the periosteum can take place without sloughing or observable augmentation ensuing. 2. The periosteum may be separated from the bone for a period of days by inflammatory products, after the withdrawal of which reunion between the periosteum and the bone may take place without necrosis ensuing, showing that the temporary separation of the periosteum from the bone, even as a pathological result, is not necessarily attended by death of bone. 3. The periosteum covering a portion of bone may be completely destroyed or permanently removed, yet the denuded bone may not only retain its vitality, but may throw out cells which will cover it and form a new periosteum. 4. A portion of bone which has its continuity severed on all sides, and at the same time has all its periosteum removed, is capable of living and growing. 5. Not only do detached portions of bone, deprived of periosteum, live when reimplanted in their original position, but such portions are capable of living after transplantation. Parts of deeper layers of bone which had no periosteal connection have been transplanted and have lived and grown. 6. The periosteum does not initiate the reproduction of bone. 7. Bone may be regenerated independently of the medulla, which may itself be reproduced. 8. The histogenetic phenomena support the foregoing observations, showing that the periosteum does not generate bone. In concluding, Dr. Macewen states that a study of the whole subject, from histogenesis to experimental inquiry and pathological observation, shows that bone is produced and regenerated by proliferation of osteoblasts, and its development and reproduction can take place independently of the medulla and periosteum. W. JOHNSON SMITH.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

155. RUMSZEWICZ, DR. KONRAD.—Poisoning by Eserine caused by Instillation of a Solution of the Drug into the Conjunctival Sac. (*Wiadomosci Lekarskie*, Dec. 15, p. 161.)

156. DÉJERINE, DR. J.—On Poisoning by Subcutaneous Injections of Cocain. (*Bulletin de la Société de Biologie*, December 1887.)

157. STEWART, DR.—Sixty-four Cases of Poisoning by Lead Chromate (Chrome Yellow).

158. CARRY, DR.—On the Toxic Qualities of Aniline Yellow Dyes.

ART. 155. *Rumszewicz on Toxic Symptoms from the Instillation of Eserine into the Conjunctival Sac.*—In the *Wiadomosci Lekarskie* (a Polish bi-

weekly), Dec. 15, 1886, p. 161, Dr. Konrad Rumszewicz, of Kiev, details an interesting instance of a pronounced idiosyncrasy with regard to eserine. The patient, a strongly-built and well-nourished man, aged 52, sought the writer's advice on account of gummatous iritis (*iritis gummosa*) of the right eye, of about a fortnight standing. For three weeks a 2 per cent. solution of atropia and a 2 per cent. one of cucaine were instilled, respectively eight and four times daily. By the end of the said time, the use of eserine was thought to be indicated. Accordingly, Dr. Rumszewicz instilled from 1 to 2 drops of a 1 per cent. (freshly prepared) solution of sulphate of eserine, three successive times, at the interval of five minutes. A few minutes after the last instillation, there suddenly appeared deadly pallor of the face, and cold, bead-like perspiration over the forehead, as well as headache and extreme general weakness. During the first hour the gentleman vomited four times, a profuse salivation intervening between the attacks. Vomiting was soon followed by diarrhœa with agonising abdominal pain, the patient swooning twice. When seen three hours after the instillations, he was still very weak, with pulse 58, and breathing 26 per minute. Under the influence of strong coffee-infusion and wine, the patient gradually recovered in two days. In spite of a prolonged use of atropia and cucaine previously to that of eserine, the right pupil was found to be by far narrower than its healthy fellow. To finally settle the diagnostic question, whether the set of symptoms had been caused by eserine or not, Dr. Rumszewicz, several days later, again instilled two minute droplets of the solution into the same eye. Within fifteen minutes abdominal pain made its appearance, to be followed in another quarter of an hour by cold bead-like sweat over the face, and vomiting, the pulse falling somewhat earlier from 74 to 62 per minute, and the respiration rising from 12 to 20. The patient returned to his usual state in about three hours. The writer concludes that he had to deal with an exquisite case of idiosyncrasic intolerance to the drug. [In an editorial note in connection with the paper above, Dr. I. K. Wiktor, of Lvov, says that he fully shares Dr. Rumszewicz's opinion, since he, jointly with Dr. Widmann, has often administered sulphate of eserine in the dose amounting to 8 milligrammes under the skin to the hospital patients suffering from coprostasis and atony of bowels, and never saw any unpleasant accessory effects, except occasional profuse perspiration. That the set of symptoms in Dr. Rumszewicz's case was caused by eserine, there could not possibly be any doubt whatever, since the phenomena were strikingly similar to those observed by Fraser (1868) in the course of his remarkable experiments on himself, as well as to those observed by Linden, Young, and Cameron-Evans (1864) in cases of accidental poisoning with physostigma. Evans's case is certainly the most interesting and important of all, since it concerns as many as 46 subjects—an adult woman and 45 children—who, having found Calabar beans scattered about the Liverpool Docks after unloading an African steamer, picked them up and ate them at the spot, developing a toxic epidemic within 20 or 30 minutes.—*Rep.*] V. Idelson, M.D.

156. *Déjerine on a Case of Poisoning by Cocain.*—Dr. J. Déjerine records an interesting case of poisoning by subcutaneous injections of cocain. The patient was a dentist, twenty-six years of age. M. Déjerine found him in a semi-comatose state, with generalised muscular contraction of the arms and legs. The arms were slightly bent, the legs were stretched out. Patellar reflex action was not discernible, owing to contraction. The pulse was quick, but regular (120); the breathing hurried. The eyes were closed, the pupils dilated and insensible to light. There was complete unconsciousness. The following lesions were detected on the skin:—There was a pustular crusty eruption, consisting of pustules the size of a pea, covered with a blackish-grey, dry scab on the anterior external surface of the two arms, and on the anterior part of the legs and thighs. This eruption resembled the scabs of syphilitic rupia. The patient had suffered from blennorrhagia. On returning to consciousness the patient walked about with closed eyes, on account of the painful sensation caused by light on the eyeballs. He gave the following particulars concerning the cause of the attack:—Six weeks previously he began to administer subcutaneous injections of cocain to himself. He began with doses of one centigramme. He increased the quantity gradually until he employed 50 centigrammes. The injection produced agreeable sensations and sexual desires, followed by ejaculation. The evening on which the attack above described took place he had injected one gramme of cocain at ten o'clock. He employed three syringes and a warm solution. At the third injection he fell down in an unconscious condition. On the following day Dr. Déjerine again examined the eruption, which consisted of limited gangrenous areas of the epidermis, resulting from the injections with cocain, which the patient had introduced into and not under the skin. At the spot where the injections were made white cadaverous spots were apparent; these were insensible to the touch. The patient stated that when M. Déjerine pinched him in different places during the state of coma he was aware of the fact, but that he felt no pain whatever. He was therefore sensible to the contact of an external object, but insensible to pain. The patient recovered. He has ceased to employ cocain. M. Déjerine considers that if the patient had not gradually accustomed himself to progressive doses of cocain, the dose of one gramme would have proved fatal. W. Vignal.

157. *Stewart on Poisoning by Lead Chromate.* Dr. Stewart, of Philadelphia, has collected the records of sixty-four cases of poisoning due to the introduction of lead chromate into the food furnished by two bakers who had recently been arrested under the coroner's warrant. This number did not by any means include the whole of the persons affected. Both sexes appeared to be equally susceptible to the metal, and each suffered with equal severity. Of five women who exhibited symptoms of plumbism during gestation, none aborted, but all at full term gave birth to living children; one had, however, two convulsions at the termination of the seventh month of pregnancy, believed to be of saturnine origin, though a small amount of albumen was present in the urine. Four of these five infants had convulsions within two months after birth, in which two died. 78·21 per cent. (50) of the cases exhibited the saturnine cachexia, displaying an anæmic appearance with an earthy-yellow hue to the skin; a sallow tint without yellowness was present in the remaining 21·87 per cent. (14). In 10·93 per cent. (7) the skin became intensely yellow at one time or another, notably when colic was present. In a large

number neurasthenic symptoms preceded the colic, &c., with mental depression, sometimes amounting to melancholia, and nearly always with marked impairment of memory. Colicky pain, headache, and arthralgia were complained of in more than three-quarters of the number with obstinate constipation in one half. Vomiting was a prominent symptom in 80 per cent. of the cases, the vomit being of a greenish hue. Lead chromate is not very soluble, but it acts as a corrosive poison, and rapidly causes death, in doses (Von Linstow) not exceeding one fifth of a grain. 89 per cent. of the sufferers showed the characteristic blue line, and the mortality up to the time of writing was 12·5 per cent.

158. *Carry on the Toxic Qualities of Aniline Yellow Dyes.*—Dr. Carry called the attention of the Lyons Société de Médecine to the case of a female carder who was suffering from a peculiar form of dyspepsia. She had been obliged to wean her infant at eight months for want of milk, and the infant was poorly and emaciated, with frequent vomiting. He noticed that the machine at which she worked was covered with a thick layer of yellow dust. Some of this dust was examined, and was found to consist of yellow cotton fibres. The patient said that when at work she was surrounded with the dust, which gave rise to a spasmodic cough. She had a marked blue line round the edges of the gums. Several fellow-workers of the patient were similarly affected, to the number of twenty. All of them sooner or later lost their appetite, and became liable to vomiting after food and in the morning, the morning vomit being yellow mucus. At the same time they suffered from colicky pains in the umbilical and hypogastric regions, not very severe, but tiresome on account of their frequency. The tongue was coated with a yellow fur, and a characteristic blue line was observable in every case on the gums and buccal mucous membrane. They also complained of supra-orbital and temporal headache. Sensation was impaired in the skin of the hands and forearm, especially on the right side. No paralysis or paresis of the extensors. Samples of the dust were submitted to chemical analysis, but no trace of lead could be detected. It was, however, elicited on inquiry that antimony was used as a mordant. One of the samples was dyed with Martius' *yellow*, a sodium salt of binitro-naphthol, and a second sample had been dyed with *solid yellow*, an amido-nitro-benzol disulphonate of sodium. It was the first sample that appeared to have given rise to the preceding symptoms. These yellow colouring agents are extensively used for colouring pastry, in the proportion of 2 or 3 grammes to the 100 kilogrammes. It is also used for colouring butter. A grain of this substance given to a dog weighing 7 kilogrammes caused loss of appetite, yellow vomit, diarrhœic stools, fever, panting respiration, and death on the sixth day. The same result was obtained in other experiments. The sulphoconjugate, solid yellow, did not produce any toxic effects. It appears that certain yellow colouring agents obtained from coal tar are toxic, while others are not, but the toxic products are very much cheaper than the others. The attention of the police has been called to the matter in virtue of an order in Council forbidding the use of injurious colouring agents in the preparation of food.

ALFRED S. GUBB.

OPHTHALMOLOGY.

RECENT PAPERS.

159. WEEKS, J. E.—Bacteriological Investigation of Antiseptics used in Ophthalmology. (*Archives of Ophthal.*, December 1887.)

160. SCHWEIGGER.—The Return to the Flap-Operation. (*Archives of Ophthal.*, December 1887.)

161. MULES, DR.—On the Treatment of Ophthalmia Neonatorum. (*Brit. Med. Jour.*, p. 244.)

162. GOLDZIEHER, DR. W.—On Patients Learning to See after Successful Operation for Cataract. (*Wiener Med. Wochensch.*, No. 3, 1888.)

ART. 159. *Weeks on Bacteriological Investigation of Antiseptics used in Ophthalmology.*—This paper forms an important practical contribution to our knowledge of the relative value of certain substances which have long had a reputation as antiseptics. Many previous experiments have been made, but the results have been of little practical value, because the conditions have not been analogous with those that exist in ophthalmic operations. A substance may be perfectly efficient as a germicide if it can be applied in sufficient quantity, and for a considerable time, but it must be remembered that the strength of the antiseptics has to be limited by the tolerance of the conjunctiva, since most of them are irritants. An antiseptic, moreover, may be sufficiently powerful to prevent the entry of germs, and yet may be powerless to destroy them when they are already present in the tissues. In the case of fluids, moreover, the contact with the cornea is only for a short time, and although with solids it can be maintained longer, yet the time is insignificant compared with that required in some experiments for the destruction of germs; moreover, the application is liable to be diluted and washed away by the lacrymal and conjunctival secretions. The experiments were made on the staphylococcus pyogenes. It is well known that even the normal conjunctival sac contains many varieties of microbes, but although this coccus is occasionally met with, it is comparatively rare, while, on the other hand, in purulent ophthalmia it is always present, and it is certainly capable of exciting suppuration when inoculated into the corneal substance. The staphylococcus was obtained by means of a sterilised platinum wire from eczema pustules, and cultures were made in a tube of agar. The virulence of the germs was tested by inoculating rabbits' eyes, panophthalmitis being set up in every instance. The soluble antiseptics were dissolved in water, and the solution was inoculated by means of threads dipped into the tube of agar. The strength of the antiseptic solutions was carefully measured, and we presume every care was taken that the dose of germs was as far as possible uniform. When prolonged exposure to the action of the antiseptic was required the germs were mixed with the solution. The effect of a large number of substances was ascertained. We only give here the result in reference to those which are generally used in ophthalmic surgery. *Perchloride of mercury*, a solution of 1 : 500 destroys vitality in 10 seconds, 1 : 4,000 in 2 minutes, 1 : 20,000 in 12–15 minutes. *Biniodide of mercury* is the active ingredient of Panas' solution, which contains to one part of it 400 of absolute alcohol, 20,000 of water. The iodide is only soluble in *absolute* alcohol—a fact that may account for tests having sometimes failed to discover its presence. Panas' solution is somewhat irritating to the conjunctiva,

probably owing to the alcohol it contains, and it is said to take two or three days to destroy the staphylococcus; if this is the case its antiseptic properties have been overpraised. *Yellow oxide of mercury* in a saturated solution took 3–4 days to destroy vitality. An ointment containing about 8 gr. to an ounce had no effect as a germicide. In fact the author found that all oils and ointment were apparently innocuous to germs in aqueous solution. *Nitrate of silver* stands at the head of antiseptics; a solution of gr. x. to oz. destroyed the germs in 8 seconds. *Permanganate of potash*, 1:50, destroyed the germs in 20 seconds, 1:100 in 1 minute. But even the latter solution is very irritating. *Carbolic acid* is also irritating; 1:20 destroyed the germs in 15 seconds; alcohol—*absolute*, in 4–12 seconds, 90 per cent., in 20–30 seconds. It is not usually applied to the eyes because of its irritating properties. It has, however, recently been advocated by Dr. Mules as an application in ophthalmia neonatorum (*see* Art. 161). *Chlorine water.*—Its germicidal effect is said to be on a par with that of the sublimate and nitrate of silver; it, however, easily decomposes unless kept in the dark and cold. *Hydrogen dioxide* was, we believe, much valued a few years ago for the treatment of purulent dacryocystitis; it destroys pyogenic germs in 1 to 1½ minutes. But it does not keep. *Boric acid.*—The writer was unable to ascertain that a saturated aqueous solution possessed any antiseptic properties. The powder retarded the development of germs, but nothing more. Among other powders, *calomel* destroyed vitality in 3 minutes. *Iodoform* retards development; if kept, a microbe forms in it, but it is not noted whether it acts injuriously. The writer has also made some experiments on the best mode of rendering instruments aseptic; he classifies the means employed into mechanical, chemical, and thermal. The first can only be efficient when the surface is perfectly smooth and polished, when firm rubbing with a soft cloth is quite efficient. As regards chemical means, many of the antiseptic agents dull the edge of the knife and roughen its surface; notably is this the case with the perchloride. Carbolic acid, 1:40, is an efficient germicide in 4–5 minutes, and does not dull the edge unless the instruments are immersed for half an hour. Alcohol is most efficient, and does not dull the edge. Several apparatus have been invented for applying dry heat, but boiling water destroys the germs on contact. We have only been able to give a short summary of this paper, in which the properties of many other substances are considered.

160. *Schweigger on the Return to the Flap-Operation.*—'One of the most interesting changes in the ophthalmology of the present day is the return to the old method of cataract operation.' From this opening sentence, and the whole tone of the article, an uninitiated reader would conclude that the old flap-operation without an iridectomy was that usually performed to the exclusion of Graefe's operation and its numerous slight modifications. As a matter of fact, nothing could be further from the truth. In this country most surgeons perform an iridectomy as part of the operation, and make an incision more or less coinciding with von Graefe's, using for the purpose the knife that goes by his name. We are aware that some operators, notably De Wecker, make a corneal flap 3·4 millimètres in height, or that this was his practice till recently, but this is by no means general. Schweigger describes his own retrogression, and that of others. He found that in many cases the wound in Graefe's operation was too small, and this, and the necessity of sacrificing the iris led gradually to the making of a larger incision. 'This was only possible by a return to the flap-operation, and so sailing under the false colours of a linear incision a gradually growing flap was used. At any rate, most ophthalmologists agreed in employing an incision running in the limbus corneæ, giving a flap 3·4 millimètres in height; this was about as close as we could get with preservation of the iris.' While recurring to the ancient incision, Schweigger has been gradually altering the form of his knife until he now uses one identical with Beer's. Having thus, in every particular, gone back to an operation which had been discarded on account of its dangers, Schweigger next demonstrated those dangers most effectively by operating with the lower section on ten eyes, which were all exceptionally favourable cases, since the other eye had been operated on successfully. The results speak for themselves. 'Eight of the ten patients had vision of $\frac{1}{2}$ to $\frac{1}{6}$ (the vision of the other two is not given; presumably, therefore, it was *nil*); two had secondary cataract with posterior synechiæ, with, however, a good prospect of improvement by a second operation. In one case prolapse of iris in the whole length of the wound took place.' A better confirmation of the wisdom of abandoning the operation could hardly have been given; but, unless he has been grossly mistranslated, Schweigger appears to consider the results encouraging. He then returned to the upward section, making a flap 4–4·5 millimètres in height without iridectomy, and this is the method he recommends. Physostigmine is used directly afterwards, and at the first dressing. Afterwards atropine, but the eye is not to be opened. 'It must not be examined at all, there really being nothing to examine.' Mydriatics are necessary, 'as more than 50 per cent. heal with posterior synechia.' In other words, for an operation which is followed by so little tendency to gaping of the wound that many have discarded the bandage altogether, which often requires no topical applications in the after-treatment, and which allows the eyes to be examined as often as is desired without risk, we are asked to substitute a proceeding which requires drugs to be employed from the commencement, abstention from all examination of the eye, and which results in half the cases in posterior synechia and in prolapse of the iris not unfrequently—reasons for which it was abandoned many years ago. This article might have been written by many people without much harm resulting. The author's name will no doubt lead to his practice being adopted by some, and then 'the flap-operation without iridectomy will regain its proper position' in a sense opposite to that intended by the writer.

161. *Mules on the Treatment of Ophthalmia Neonatorum.*—The writer suggests the following plan with which he has had great success. The lids are opened and thoroughly dried, and the exposed conjunctival surface is then brushed over with ethylic alcohol, and then freely washed with a $\frac{1}{2000}$ solution of corrosive sublimate. The patient is given a solution of $\frac{1}{4000}$ for frequent use. This treatment is said to be exceedingly efficacious, the first application arresting the discharge of pus, a thin secretion remains, resulting, the author thinks, from the epithelium being destroyed. It is believed that, owing to the tissues being dehydrated by the alcohol, the

germs which require moisture are killed, the tissues are rendered more permeable by the mercurial solution at the same time. Although the discharge is arrested, it is stated that the granular condition of the conjunctiva is not so quickly reduced as with nitrate of silver. If this is so, there is no reason why the above treatment should not be used at first, and nitrate of silver later. It must be remembered that alcohol is a powerful irritant to the normal conjunctiva, and it would be well to avoid it coming into contact with the cornea. Should this treatment prove on further trial to be efficient and safe, its application might be extended to other conditions which are believed to be produced by micro-organisms.

W. ADAMS FROST.

162. *Goldzieher on Patients Learning to See after Successful Operation for Cataract.*—Dr. W. Goldzieher, after describing two cases of congenital cataract of both eyes, goes on to describe the condition of the patients after the power of seeing has been restored (*Wiener Med. Wochensch.*, No. 3). They could not make the slightest use of their eyes. Though there was a flood of light entering their eyes, it was to them but a chaos of light and colour. All else was unintelligible to them, and probably unobserved by them. They had not even the power over the muscles of the eye, so as to be able to fix an object—*i.e.* to bring the most sensitive part of the retina to bear on the object. The innervation of the external eye muscles depends on the use of the macula lutea, and the central position of the retina is the source of all movements of the eye. Hence patients that have been successfully operated on do not try to make any co-ordinate movements of the eyes, which is the secret of the helpless rolling of the eyeballs. Such seeing cannot give a proper impression of an object. They must be encouraged to compare what they perceive through the eye with the impression they gain through the sense of touch. Those who are mentally quicker as well as eager to learn will make rapid progress in learning the art of seeing. Seeing is a very complicated psycho-physical act, which has to be learnt by all sooner or later. By the irritation of the retina caused by some as yet unknown chemical process and by the muscular sensations we obtain data, which enable the mind to form a picture of an object. Each individual must learn how to manage the apparatus he is provided with, and if he cannot do so in youth he is at a great disadvantage. It is also necessary that the aid of memory be called in to compare the pictures gained of different objects. Munk has asserted that there is a *psychical* blindness arising from the disease of a portion of the cerebral cortex, in consequence of which the memory cannot store up pictures of objects. And so sober and careful a pathologist as Nothnagel expresses himself convinced that such is the case. All this tends to show how difficult it must be for those who have been blind to acquire the art of seeing. This also gives a clue to the explanation of so-called amblyopia ex anopia, which occurs in those who have been operated on for congenital cataract and in squinters. Formerly it was thought that the retina had become functionally weak from want of exercise. But there are no anatomical data to support this view, but rather against it there is the fact that such patients can distinguish colours. Goldzieher holds that amblyopia ex anopia is a kind of psychical blindness, owing chiefly to the absence of the sense of space.

JOHN ELLIOTT.

LARYNGOLOGY AND RHINOLOGY.

RECENT PAPERS.

163. HARKIN, ALEXANDER.—On the Nature and Treatment of Epistaxis. (Read at meeting of British Medical Association at Dublin, 1887.)

164. THORNER, MAX.—Salol; with Report on the Use of Salol in Affections of the Throat, Ear, and Eye. (*Cincinnati Lancet-Clinic*, December 10, 1887.)

165. CORFIELD, W. H.—Outbreaks of Sore-throat caused by Slight Escapes of Coal-gas. (*Transactions of the Society of Medical Officers of Health*, 1886-87.)

166. ROSENBERG, ALBERT.—A New Laryngeal Instrument. (Reprint from *Therapeutische Monatshefte*, December 1887.)

167. INGALS, E. FLETCHER.—Intubation of the Larynx. (*New York Med. Jour.*, July 2 and 9, 1887.)

168. ROE, JOHN O.—Hay-fever: Analysis of Cases, with Results of Treatment. (*Boston Med. and Surg. Jour.*, June 9, 1887.)

169. DELAVAN, D. BRYSON.—On the Treatment of Atrophic Rhinitis by the Application of the Galvanic Current. (*Ibid.*)

170. JARVIS, W. C.—Two Unique Cases of Congenital Occlusion of the Anterior Nares. (*Ibid.*)

171. MACCOY, ALEXANDER W.—A Comparative Study of Some of the Methods of Treatment best adapted to the Relief of Occlusion of the Posterior Nares. (*Ibid.*)

ART. 163. *Harkin on the Nature and Treatment of Epistaxis.*—Dr. Harkin, in a paper read before the British Medical Association in Dublin in 1887 (reprint), regards epistaxis as a sign of a 'blood dyscrasis,' due to hepatic disorder, 'an abnormal condition of the tissue-elements or cells in the liver.' He recommends as treatment the free administration of chlorate of potash, alone or combined with a soluble salt of iron, and the application of counter-irritation over the liver in the form of a large blister.

164. *Thorner on Salol.*—Dr. Max Thorner (*Cincinnati Lancet-Clinic*, Dec. 10, 1887) has used salol with advantage in doses of from 10 to 15 grains three times daily in acute catarrhal pharyngitis, especially in rheumatic patients. He has also found great benefit from it in tonsillitis (follicular and parenchymatous) and in rheumatic torticollis. In the latter affection 5 grains were given in pill every two hours. As a mouth-wash in stomatitis mercurialis, in syphilitic ulcers of the pharynx, and in ulcers of the tongue produced by the sharp edge of a tooth, a 6 per cent. solution did not prove of any special advantage.

165. *Corfield on Sore-throat caused by Coal-gas.*—Professor Corfield (*Transactions of the Society of Medical Officers of Health*, 1886-87), in a paper read before that society in April of last year, draws attention to some outbreaks of sore-throat which he has observed, and which were apparently due to slight escapes of coal-gas occurring especially in sleeping apartments. The sore-throats are described as relaxed or ulcerated throats, and they all got well when the gas leakages were cured. The most effective agents in the coal-gas in producing the sore-throats he considers to be the sulphide of carbon and other sulphur compounds known to be contained in it. In the discussion following, Mr. Wynter Blyth remarked that coal-gas, and sewer-gas also, might enter a house through the water mains. Sulphide of carbon was present in such

small quantities in coal-gas that it would not be sufficient to affect health. He had noticed headaches in one manufacture where sulphide of carbon was much used. Mr. Rogers Field always made it a practice to test the gas-pipes after the drainage of a house had been reconstructed by attaching a pressure-gauge and pumping air into the pipes, and not being satisfied until the gauge would stand. He also referred to the fracture of gas mains as a cause of the entry of gas into houses. Mr. Shirley Murphy thought that, although Dr. Corfield's cases were suggestive of coal-gas as a cause, it could not be said that they afforded absolute proof. Dr. Corfield, in reply, considered that as in a number of instances he had found that persons who slept in rooms in which there were slight escapes of coal-gas suffered from sore-throats, and in every instance got quite well when the gas leakages were cured, he was justified in the conclusion he had drawn.

166. *Rosenberg on a New Laryngeal Instrument.* Dr. A. Rosenberg, of Berlin (*Therapeutische Monatshefte*, 1887), describes a small triangular mirror, which is inserted into the cocainised glottis. By an ingenious arrangement, its angle can be altered whilst the instrument is in position. The image received on it is reflected into the observer's eye by means of an ordinary laryngeal mirror. Its special object is stated to be to see the posterior laryngeal wall and the subglottic region.

167. *Ingals on Intubation of the Larynx.*—These papers (*New York Med. Jour.*, July 2 and 9, 1887) may be read with interest in conjunction with the pamphlet reviewed in the London Medical Recorder, p. 83, on the same subject. Dr. Ingals recognises fully the value of intubation, and gives very clear details for introducing the tube. He cautions against allowing the gag to slip in operating in a case of diphtheria, having lost a friend from a bite owing to this accident. Whilst the O'Dwyer tube is in position he recommends total abstinence from liquids, and nourishment by means of soft solids and enemata. Tubes with smaller heads designed to rest on the vocal cords, he says, have not yet been used sufficiently often to enable us to speak positively about them.

168. *Roe on Hay-fever.*—Dr. John O. Roe (*Boston Med. and Surg. Jour.*, June 9, 1887) concludes that with careful and thorough treatment of the disease of the nasal tissue combined with that of other portions of the respiratory passages below, which have become secondary sources of irritation, we need not fail to cure hay-fever. Deep cauterisation he has found most effective, superficial cauterisation having no marked effect.

169. *Delavan on the Treatment of Atrophic Rhinitis by Applications of the Galvanic Current.*—Dr. Delavan (*Ibid.*) has used the constant current with benefit, by applying the positive pole to the nape of the neck and the negative pole to the interior of the nose by means of a copper wire enveloped in absorbent wool.

170. *Jarvis on Congenital Occlusion of the Anterior Nares.*—Two cases of this description are briefly related (*Boston Med. and Surg. Jour.*, June 30, 1887). The first was that of a young man aged 18, with complete closure of both nostrils. On either side within the anterior naris there was a cup-shaped depression of white glistening membrane. The obstruction was cartilaginous, and was cut through with the author's burrs. A year later the right nostril had contracted and had to be reopened. In the second case the occlusion was osseous and was successfully treated in the same manner.

171. *MacCoy on the Treatment of Occlusion of the Posterior Nares.*—Dr. MacCoy (*Ibid.*) urges the superiority of chromic acid fused on to the end of a probe for the treatment of this symptom, when due to enlargement of the soft parts.

E. Cresswell Baber, M.B.

DISEASES OF CHILDREN.

RECENT PAPERS.

172. Goodhart.—On Hydrocephalus. (*Archives of Pediatrics*, No. 49.)

173. Schrakamp.—On Changes of Organs in Diphtheria. (*Archiv für Kinderheilk.*, Band ix., Heft. 3.)

174. Hun.—On a Case of Gliomatous Hypertrophy of the Pons. (*Boston Med. and Surg. Jour.*, vol. cxvii., No. 23.)

175. Steffen.—On Acute Myocarditis. (*Jahrbuch für Kinderheilk.*, Band xxvii., Heft 3.)

176. Grancher, Dr.—On a Case of Asystolic, Hypertrophic Cirrhosis in a Child. (*Rev. Gén. de Clinique et de Thérap.*, Jan. 26, 1888.)

177. Cordier, Dr.—On the Etiology of Atrophic Infantile Paralysis. (*Gaz. Méd. de Paris*, Jan. 14, 1888.)

178. Clendinnen.—On Malted Food in Infantile Diarrhœa. (*Australian Med. Jour.*, December 1887, p. 572.)

Art. 172. *Goodhart on Hydrocephalus.*—Dr. Goodhart contributes a thoughtful article on this subject to the current number of the *Archives of Pediatrics*. He objects to the use of the word acute as applied to hydrocephalus; the usual synonym, tubercular meningitis, should be substituted, and when the condition is not tubercular it is, in the author's opinion, one of engorgement or œdema rather than of hydrocephalus. With regard to hydrocephalus proper, or, as it has been hitherto called, chronic hydrocephalus, he points out that when an abrupt fatal termination occurs it is not necessary to assume a 'sudden effusion at the base of the brain,' for it will be noticed *post mortem* that the fourth ventricle is so expanded as to flatten and compress the medulla, and thus render the circulation within it so difficult as to make sudden death a probability. The third ventricle is also distended and forms a pellucid cyst upon which rest the corpora albicantia, while in front the optic nerves may be so œdematous as to appear like ampulliform protuberances. Dr. Goodhart recognises three causes of hydrocephalus: 1. Cerebellar tumours (including those of tentorium and pons); 2. Chronic inflammation and adhesions at the base of the brain between the medulla and the cerebellum; 3. Congenital malformations. These nearly always act by causing increased blood-pressure in association with obstructed outlets. Cases which result from inflammatory effusion such as occurs in other serous membranes the author regards as of the greatest rarity. For treatment, he advocates the old method of strapping and paracentesis, or, when the case is of inflammatory origin, inunction of mercurials; the strapping places the head in a condition more nearly resembling that of the adult in whom hydrocephalus occurs with such rarity. [It may be questioned whether this rarity is not due to a fatal termination occurring before there has been time for dilatation of ventricles. Dr. Goodhart

mentions amongst the numerous conditions loosely attributed to water on the brain, 'cutting the teeth in the loins,' which he says he has not yet fathomed. The writer has found that by this expression mothers refer to the association of backward or crossed dentition with a pseudo-kyphosis—in other words, to rickets.—*Rep.*]

173. *Schrakamp on Changes of Organs in Diphtheria.*—The author bases his results upon 54 consecutive autopsies performed by him while assistant physician at the Children's Hospital, Stuttgart. The total mortality from diphtheria there was 39 per cent. The buccal membrane was affected in two cases only; the pharynx and tonsils in 43; the nose in 11; and these were all severe septic forms of the complaint, so that the appearance of the membrane upon the nostrils came to be regarded as rendering the prognosis grave. The œsophagus was involved three times, and, in one of these, the stomach also showed patches. The larynx was quite unaffected in three cases, and in twelve others it was the seat of simple inflammation. Of the 39 cases in which a pseudo-membrane was found, 30 involved the whole interior of the larynx; 3 were limited to the under surface of the epiglottis and the upper third of the larynx; and in the remaining 6 the false membrane was entirely below the level of the false chords. The trachea was unaffected in but two cases; it was the seat of simple inflammation in 17; and it exhibited false membranes in the remaining 35. These were usually tubular, and only exceptionally in patches. In one instance the trachea was perforated; but this was due, not to internal ulceration, but to suppuration of the thymus gland bursting into it. Bronchitis existed in 40 cases, sometimes with, sometimes without, false membranes. In the majority of the former the membrane could be traced only to the second or third ramifications, and the posterior portion of the lung was that most affected; but, in a few cases, it could be followed to the minutest subdivisions. It is an open question whether the thick purulent matter found in all cases in the smaller bronchi may not have been a *post mortem* solution of a false membrane. At all events, in the later cases, where the precaution was taken to inject alcohol within an hour or two of death, these membranes were found much more constantly. Under the microscope the subjacent mucous membrane appeared very little altered. Pneumonia was present thirty-one times, and was always associated with bronchitis. On the other hand nine of the cases of bronchitis showed no pneumonia; this fact was taken as evidence in favour of the modern view of propagation by extension. More or less general atelectasis was observed in nine; a fresh attack of pleurisy in six being accompanied by effusion. True metastatic abscesses were seen in only two cases, but several showed central suppuration in a perichondrial nodule. Hæmorrhages were so common as to give a special feature to diphtheritic bronchopneumonia; usually as sharply circumscribed subpleural petechiæ, but in a few instances as infarcts or effusions. Pericarditis occurred fourteen times, and in two of these the effusion was purulent. Endocarditis was observed only twice, and this fact is taken as evidence against Bouchut's view that the hæmorrhages of the lung, &c., are due to emboli from granulations within the heart. Other cases showed only slight swelling and opacity of the lining membrane of the heart, to which the term degeneration was more applicable than that of inflammation. The myocardium was involved much more frequently. Nine times it showed fatty degeneration, and seventeen times it was observed to be of a dull greyish yellow colour. Pigmentary spots, as described by Leyden, were never seen. In fact it was never the seat of an inflammatory process. True thromboses were found in the heart in only two cases—those of endocarditis already described; but some doubtfully *ante mortem* clots were seen. The blood presented no peculiar characters, but in the septic cases it resembled a dirty brown plum juice. The kidneys were affected in 22 out of the 54 cases. They were enlarged more especially in the direction of their thickness; their capsules were easily separated; their colour was sometimes dark red, sometimes pale; in the former case, small ecchymoses were frequent. The lymphatic glands were involved forty-six times, the principal being the submaxillary, the cervical, and the bronchial, and in a few cases the mesenteric glands. In 34 the enlargement appeared to be due to the diphtheria, but in the other twelve it may have been partly tubercular, as the lungs were found in that state. The genitals (labia) were only once affected. Finally, the cause of death appeared, in the majority of cases, to be due to interference with respiration; but frequently other conditions, as septicæmia, decomposition of the blood, defective nutrition, degeneration, &c., helped to bring about this result.

174. *Hun on a Case of Gliomatous Hypertrophy of the Pons.*—This occurred in a female child, aged 6, whose father died within a year of her birth of melancholia and dementia, associated, according to his widow's account of the autopsy, with 'water on the brain and a tumour of the brain.' The mother's family was healthy. The patient herself had nothing but a few attacks of spasmodic croup, and, three years before, measles; for a number of years, however, her left leg became easily tired, and the corresponding foot showed a tendency to turn in. Otherwise her health was good until two months before admission, when she had one of her spasmodic attacks followed by pain in the head every time she coughed. She began to walk badly three weeks ago. Note on admission, April 17, 1886.—Mind clear, memory good, no nervous condition, appetite excessive, and occasional vomiting. Expression vacant, speech drawling, swallowing somewhat difficult, head mostly drawn towards right shoulder, more especially on exertion. She stands with feet apart, walks with a drunken gait, and has so much more freedom of movement in the left leg that her progression is circular and to the right. The legs and arms are weak, and the movement of the latter, more especially the right, are very awkward. No disturbance of sensibility. Plantar reflex normal; no ankle clonus; knee jerk exaggerated, especially on the right side. With ophthalmoscope, well-marked double optic neuritis. Urine contains neither albumen nor sugar. May 21.—Has slowly and steadily failed. Legs bend under her; sensibility of all kinds normal; intelligence dull, but with little or no loss of memory; articulation indistinct; deglutition difficult; movements of soft palate sluggish but equal; protrusion of tongue sluggish but central. Pulse small, 120–140; respiration slow when awake, rapid and panting when asleep. Slight internal squint. June 4.—Somewhat better as regards deglutition, articulation, power in back, and intelligence; but she cannot walk; well-marked ankle

clonus was present for one day. June 13.—Rapidly failing; left arm and leg on some days completely paralysed, on others not so completely. Unable to walk, stand, or prevent the head gravitating. Sight slightly impaired; hearing and sensibility unaffected. Head increased in size; some occipital pain; pulse small and feeble; respiration occasionally stertorous for a time; no convulsions; intelligence clear till death, which took place quietly in the evening. Autopsy twenty-four hours after death.—Head only examined. Bones of skull rather thin. Dura mater slightly adherent. Subarachnoid fluid increased; convolutions flattened; brain œdematous; corpus callosum very soft and thin, and pressed upwards; lateral ventricles greatly distended with fluid of normal appearance. Third and fourth ventricles unaffected. Pons greatly, but evenly, enlarged, appearing, on section, to be replaced by a glioma; an area of softening on the right side a little behind middle. Crura cerebri and medulla but slightly enlarged. Microscope showed chiefly spindle cells, a good many large and small spheroidal cells, and only a few spider cells. There were also a basement membrane independent of the neuroglia, and a great many newly-formed vessels. The cell proliferation extended, diminishing with distance, throughout the whole extent of the crura cerebri and medulla, and especially to the roof of the aqueduct of Sylvius. The tumour was, therefore, what has sometimes been termed a glio-sarcoma; but, having regard to its infiltrated character and the preservation of the shape, though not of the size, of the pons, Professor Hun prefers the name proposed by Kümmel—gliomatous hypertrophy of the pons.

175. *Steffen on Acute Myocarditis.*—Idiopathic myocarditis is excessively rare, and no instance of it has come within the author's experience. As a complication it may be either diffused or circumscribed. The latter is seen occasionally in the course of fevers, more especially of enteric fever. It is characterised by sudden pain in the præcordial region, rapid loss of strength, some dyspnœa and lividity. The pulse is excessively rapid or galloping, and irregular. This condition persists for from 4 to 8 days, when the symptoms subside, leaving weakness for a considerable time, and, for some time after, pain on exertion. The diagnosis is made by a process of exclusion, for physical examination yields negative results.

Diffuse myocarditis also appears in the course of acute infectious disorders, and chiefly in diphtheria. In this disease it supervenes simultaneously with albuminuria. The child becomes suddenly pale and pinched; it is then either extremely restless or else apathetic; the pulse is frequent and almost imperceptible; the temperature is normal or nearly so; respiration more or less rapid. Physical examination gives signs of dilatation of the whole heart and not of the right ventricle only, as asserted by many authors; the heart's apex is displaced outwards beyond the nipple line and somewhat downwards; heart's sounds weak but otherwise normal. The urine diminishes with the development of the myocarditis. With recovery from the diphtheritic infection, the heart symptoms gradually subside until the dulness becomes normal, but the organ remains weak for a considerable time. When the case has a fatal termination this is apt to take place suddenly, but is sometimes preceded by slight anasarca. The autopsy shows dilatatio cordis and, on microscopic examination, granular opacity of the fibrillæ, or, more rarely, fatty degeneration; but in cases which have run a very rapid course the microscope discovers little or no abnormalities. Other cases may terminate favourably, but they cannot be considered safe until all signs of dilatation of the heart have disappeared.

The dilatation due to diffuse myocarditis differs from the simple acute dilatation, which sometimes complicates the exanthemata by its slower and more gradual supervention; moreover, it is less extensive. The dilatation due to endocarditis also comes and goes much more rapidly, and the pain and extreme *anxietas* are wanting; but the two may be present together. Less frequently, pericarditis ensues upon myocarditis. R. W. Leftwich, M.D.

176. *Grancher on a Case of Asystolic, Hypertrophic Cirrhosis in a Child.*—A child, aged 11, was admitted on Nov. 7, 1887. No family history of syphilis or tuberculosis, but father was a confirmed inebriate. When 5 years of age the patient had scarlatina and then typhoid fever, but his general health remained good until the month of April preceding, when the abdomen began to increase in size, accompanied by epistaxis and vomiting. The eyelids became puffy, and the face became markedly cyanotic. A month later the legs had become œdematous. As albumen was found in the urine it was diagnosed to be a case of post-scarlatinal nephritis. On admission, only a trace of albumen was found in the urine. The breathing was laboured, and the jugular veins were gorged with blood, without any venous pulsation. The abdomen was of an enormous size, and the superficial veins were very prominent. In consequence of the ascites neither the liver nor the spleen could be detected on palpation. On auscultation œdematous râles were heard over the bases of the lungs, and the breathing sounds were accentuated at the apices. The area of precordial dulness was manifestly increased, but nothing abnormal could be discovered in the heart-beat beyond accentuation of the second sound over the base to the left of the sternum. The urine was scanty and dark in colour. Temperature normal. The patient was tapped, and about eight pints of fluid withdrawn. The liver was then discovered to be enormously augmented in size, reaching down to the umbilicus, the left lobe reaching to and being indistinguishable from the spleen. There had been no hepatic colic and no jaundice, and the urine did not contain bile salts.

177. *Cordier on the Etiology of Atrophic Infantile Paralysis.*—Thirteen cases of atrophic paralysis in children of from 1 to 30 months were recorded in less than two months among a population not exceeding 1,500. Nearly all of them were in good health prior to the attack, and four of them succumbed on the third day. The others presented the permanent and characteristic lesions of the disease. The symptoms were fever, marked in proportion to the gravity of the attack, convulsions (in half the number); profuse perspiration, absent in the four fatal cases; paralysis as early as the second or third day, and variable in extent and distribution; and, finally, atrophy and consecutive deformities. The occurrence of these thirteen cases in such circumscribed limits as regards time, place, and population, militated against the idea of a simple coincidence, and points to the existence of a genuine epidemic. A careful consideration of the circumstances under which the outbreak occurred led Dr. Cordier to the conclusion that the infection had not gained access into the economy either through the food, the drink,

nor, in the absence of cutaneous lesions, by inoculation. He infers that the air must have been the vehicle of transmission. He was enabled to trace the spread of the disease from one little patient to another by comparing the dates and inquiring into the communications between the various families. In one case thirty-six hours elapsed before the disease declared itself, and in two others only from eight to ten hours. Although not conclusive, these facts may be of service in aiding the elucidation of an obscure question of etiology. ALFRED S. GUBB.

178. *Clendinnen on Malted Food in Infantile Diarrhœa.*—In the *Australian Med. Jour.*, December 1887, p. 572, Dr. Clendinnen writes that he has met with considerable success from the use of malt in the treatment of infantile diarrhœa. In a case in a child about three months old, there were passed very large lumps of casein, together with a quantity of green matter; the author ordered the child to be fed upon half a teaspoonful of Kepler's extract of malt added to a pint of milk. In forty-eight hours the lumps of casein, together with the green matter in the motions, had disappeared, the child slept well, and the diarrhœa ceased entirely. In several other cases this treatment was adopted with complete success. Three ways have been suggested for adapting the casein of cow's milk to the requirements of young children :—(1) peptonisation ; (2) the addition of barley-water ; (3) the use of malt.

RICHARD NEALE, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

179. DIEULAFOY, DR.—A Case of Narcolepsy.
180. LEMOINE.—On Antipyrin in Cases of Epilepsy.
181. WIDE, ANDERS.—On the Treatment of Disease by Nerve Pressure. (*Nordiskt Medicinskt Arkiv*, Band xix., Nov. 10, 1887.)

ART. 179. *Dieulafoy on a Case of Narcolepsy.*—Dr. Dieulafoy has treated a case of narcolepsy at the Hôpital St. Antoine, of which the following account appeared in *La France Médicale* of Jan. 10 and 12 last :—The subject, 16 years old, came to the Hôpital St. Antoine, complaining of continual attacks of irresistible sleep, recurring at short intervals. No hereditary antecedents ; but his grandfather was asthmatic, and his father died of diabetes ; is not alcoholic and has had neither syphilis nor malarial fever ; but has a sister, 17 years old, who is decidedly hysterical. From the age of 7 up to the present year has always suffered from slight *tic* in the head and neck, causing him every now and then to raise the head suddenly, turning to the right, at the same time that the mouth was contracted in the same direction. A short time ago he caught the itch, for which he was treated at the Hôpital St. Louis, and subjected to the classical scrubbing. Three days afterwards, the sudden attacks of sleep commenced. At any moment, standing up, walking, even at meals, his eyes would suddenly close, his head droop, and he would fall sound asleep for 20, 40, or 60 seconds, sometimes a little longer ; he would then as suddenly awake and instantly recover presence of mind. These attacks are more frequent in the afternoon and after meals ; they amounted to 17 and 20 in an hour, and to upwards of two hundred during the day, sometimes as many as three or four in fifteen minutes. The attacks could always be brought on voluntarily by inclining the head forwards, and the patient could not pick up an object from the floor without falling asleep instantly and being thrown violently forward on his face. His sleep at night is normal and calm ; but on awakening he feels fatigued, and his limbs are heavy. Health otherwise good. Sight good, hearing normal. Close examination showed a slight degree of anæsthesia to the left on the arm and the chest. Auscultation revealed a slight systolic *souffle* of the heart, more decided towards the base. Urine normal, no traces of sugar or albumen. *Treatment.*—Dr. Dieulafoy prescribed 2 grammes of bromide of potassium daily, and cold shower-baths every morning. There was a rapid amelioration. The attacks diminished in number, and the patient was soon able to return to his situation as waiter in a wine-shop and resume his very fatiguing occupation, remaining up to two in the morning, and being obliged to rise between six and seven. He continued the treatment for three months, when the bromide causing nausea he ceased to take it, but continued the douches three times a week. The attacks ceased almost entirely, except in the evening between six and seven before supper, when he still falls asleep suddenly in the position in which he happens to be, and remains unconscious for about half an hour. On the douche days this attack is often absent. In March, eight months after the first attack, he was almost cured. He seldom fell, and can even stoop and pick up objects from the floor without inconvenience. A year after the first symptoms the cure seemed complete. There still exists slight anæsthesis to the left on the arm, and between the third intercostal space and a cross-line passing by the navel. The cardiac *souffle* is no longer perceptible. The conclusion is that this case is one of hysteria, probably provoked by the scrubbing for itch, and that it is a degeneration in the neuropathological sense. It is interesting on account of the sometimes difficult diagnosis of narcolepsy, and of the *petit-mal*, as yet so little known.

180. *Lemoine on Antipyrin in Cases of Epilepsy.*—M. Geo. Lemoine, professor *agrégé* at the Faculty of Medicine at Lille, has studied the effects of antipyrin in cases of epilepsy. He concludes that antipyrin diminishes the number of epileptic attacks and even causes them to disappear in the following categories :—1. When the attacks occur at the menstrual period, and are apparently induced by menstruation. 2. When patients present masked attacks of a psychical nature. 3. When the patients are subject to neuralgia and migraine. In every other instance M. Geo. Lemoine believes that antipyrin produces merely transitory effects. Its action is, therefore, very limited in cases of epilepsy, and the employment of this drug would hardly constitute a systematic treatment for this affection.

W. VIGNAL.

181. *Wide on the Treatment of Disease by Nerve-Pressure.*—In the *Nordiskt Medicinskt Arkiv*, Band xix., Nov. 10, 1887, Dr. Anders Wide gives three cases of nerve-pressure—a method of treatment which appears to have been originated by Ling, and has been principally employed against constitutional diseases. Dr. Wide gives three cases of nervous affections treated in this manner. The first was a woman 20 years of age who had tremblings of the pronator and supinator muscles of the arm.

The arm and hand made about 200 oscillations in the minute. In 1883 she had been treated by electricity and other remedial measures without any success, and in October 1884 they commenced to employ pressure upon the radial and median nerves about the middle of the humerus. This was first done with the fingers, then with a tourniquet, which was kept on at first between two and four hours, and in the end between eight and ten hours. After eleven days of treatment, during which the tourniquet was applied seven times, the trembling entirely ceased. The next case was one of cramp—a spasm in the spinal accessory of the right side. The patient was a shoemaker, 21 years old. His head was drawn backwards and to the left with such force that the patient was often obliged to hold it with both hands to prevent suffocation. By using strong and continued pressure of the fingers on the nerve at its entry into the trapezius muscle, Dr. Wide always succeeded in relieving the cramp, and the attacks were often slow to return. Afterwards a strap was applied in the form of a figure of 8 bandage round the shoulders to exercise a sustained pressure upon the nerve. During the year in which the author attended this case the strap was of such good service that the patient could breathe freely without using his hands. The third was a case of paresis and atrophy of the right forearm in a girl 11 years of age, the result of dislocation of the thumb. Electricity, massage, and medical gymnastics produced no effect, but on the application of pressure upon the radial nerve there was a rapid improvement. The power of contraction returned to the affected muscles, and the nutrition of the limb gradually improved. The author claims to have brought about some improvement in a case of locomotor ataxia by using pressure on the nerves. This pressure may be applied to most of the nerves of the head, trunk, and extremities, and sometimes also upon the sympathetic. Affections of the stomach have derived benefit from pressure applied to the cœliac plexus. Dr. Wide gives directions at what points pressure may be best applied on the different nerves.

W. W. Ireland, M.D.

REVIEWS.

Article 182.

Sprains: their Consequences and Treatment. By C. W. Mansell Moullin, M.A., M.D., Oxon., F.R.C.S., Assistant Surgeon and Senior Demonstrator of Anatomy at the London Hospital; formerly Radcliffe Travelling Fellow and Fellow of Pembroke College, Oxford. London: H. K. Lewis. 1887.

This, we fear, will be found by many a disappointing book. Its subject is one of much practical importance, and the author has certainly made a very careful study of the nature and treatment of the injuries known as sprains, but notwithstanding this conscientious labour the work seems to be one that will very probably fail to meet the requirements either of the practitioner or of the student. It is too discursive, and without adding materially to our knowledge of the subject, or laying down any precise conclusions on points of diagnosis or treatment, is far too lengthy. Had some of the chapters, particularly the first five, been considerably condensed, the book, we think, would have been more satisfactory. The section devoted to the different methods of treatment presents much valuable instruction, and the busy practitioner who has but little time for aught save a rapid reference to modern surgical literature, will find many useful and interesting hints in the chapters on massage and forcible manipulation. In his study of these somewhat obscure varieties of injury, and of their many serious results, Dr. Moullin has been guided, to a considerable extent, by his own clinical experience, and his views on the value of the many methods of treatment that have from time to time been proposed in cases of sprains merit full consideration. It is to be feared, however, that we have yet to gain a clearer insight into the nature and management of these injuries before surgeons are likely in such cases to be relieved of the competition of irregular practitioners.

Article 183.

Gout and its Relations to Diseases of the Liver and Kidneys. By Robson Roose, M.D., F.C.S., F.R.C.P.Edin., &c. Fifth edition. London. H. K. Lewis. 1888.

The fifth edition of this work, appearing within six months of its predecessor, affords sufficient evidence of its appreciation by the profession. It is a convenient *résumé* of the etiology, pathology, course and treatment of this protean affection, based on the author's extensive experience. The complications due to other organs being involved by the processus, are specially discussed, and the directions for treatment, though not novel, are well up to date and are conveyed in a practical manner.

Article 184.

An Index of Surgery, being a Concise Classification of the Main Facts and Theories of Surgery for the Use of Senior Students and Others. By C. B. Keetley, F.R.C.S., Senior Surgeon to the West London Hospital. Fourth Edition. London: Smith, Elder, & Co. 1887.

There is very little to be written in review of a book that has in the course of six years reached a fourth edition. Mr. Keetley's work has fairly deserved so large a circulation, for it is undoubtedly a good guide to the large text-books of surgery and a useful and legitimate aid to students working for surgical examinations. The author and his colleague have all endeavoured to maintain the excellence of the work by making numerous additions of new, and, at the same time, judicious eliminations of useless matter.

Article 185.

Intubation of the Larynx. Papers read before the New York Academy of Medicine in the stated meeting of June 2, 1887. By A. Jacobi, Joseph O'Dwyer, Francis Huber, Dillon Brown. W. P. Northrup, I. H. Hance, and A. Caillé,

This little brochure of 68 pages, which is reprinted from the *Medical Record*, June 18, 25, and July 23, 1887, contains articles of high interest on intubation. In the first paper, Dr. Francis Huber gives full details for the performance of this operation, the indications for it, its mishaps, &c. He finds that 'intubation affords relief as effectually and as thoroughly as tracheotomy; moreover, it is a simpler

and a safer method.' Dr. Joseph O'Dwyer, the re-introducer of this practice, describes the most improved forms of tubes for overcoming the difficulty in feeding while the tube is *in situ*, and gives his reasons for not believing in the food-pneumonia theory. Dr. W. P. Northrup contributes a short article on the 'Pathological Anatomy of the Respiratory Tract after Death from Laryngeal Diphtheria and Intubation.' A short contribution to the discussion by Dr. Caillé is followed by an article by Dr. Dillon Brown, of New York, in which the dangers and accidents of intubation are carefully reviewed. His chief conclusion is that the *unavoidable* accidents are few, and, with the exception of pushing down pseudo-membrane before the tube —which is a rare complication—they are not important. The last paper is by Dr. Irwin H. Hance on tracheotomy following intubation of the larynx, in which he relates a case where tracheotomy had to be performed after the tubes had proved useless —from the presence of an excess of thick tenacious mucus in the trachea, and a partial dislodgement of the false membrane by the introduction of the tube. Nevertheless, he is inclined to resort to tracheotomy only after he has proved that intubation has failed. Anyone wishing to give intubation a trial should certainly peruse this collection of papers, which also contains an illustration of the tubes recommended by Dr. O'Dwyer, and tables by Dr. Dillon Brown of 806 cases of intubation.

E. CRESSWELL BABER, M.B.

ARTICLE 186.

The Journal of Laryngology and Rhinology: an Analytical Record of Current Literature relating to the Throat and Nose. Edited by Sir MORELL MACKENZIE, M.D., and R. NORRIS WOLFENDEN, M.D., Cantab, with the assistance of numerous Collaborators. London: J. & A. Churchill.

Archives de Laryngologie, de Rhinologie, et des Maladies des Premières Voies Respiratoires et Digestives. Fondées et publiées par le Dr. A. RUAULT, with the co-operation of Messrs. BOUCHARD, CORNIL, VERNEUIL, TRÉLAT, and others. Paris: G. Steinheil.

THE year 1887 has seen the appearance of the above two new journals, devoted to the speciality of laryngology and rhinology. The English journal was started at the beginning of the year, and has since been issued monthly. Of the French one, which is bi-monthly, two numbers only have appeared.

The *Journal of Laryngology* contains no original monographs, but is devoted almost entirely to abstracts of papers in other journals and to reviews. In this respect it resembles its valuable cotemporary, Dr. Felix Semon's *Internationales Centralblatt für Laryngologie, Rhinologie, &c.* Sir Morell Mackenzie's journal aims at giving abstracts of all articles and publications dealing with the subjects within its scope, and if this plan be thoroughly carried out it will doubtless be of much service to those practitioners who are unacquainted with the German language. It has also a feature of its own—viz., editorial articles on some subjects exciting special interest.

Dr. Ruault's *Archives* run on other lines. They are made up of original articles, reviews, proceedings of societies, and abstracts. The first two numbers contain papers by Drs. F. Verchère, Jalaguier, Cartaz, Gaucher, and Ruault. The latter, we notice in the second number, recommends as a nasal douche in ozæna and in purulent rhinitis an alcoholic solution of naphthol β (12 grammes of the former to 84 grammes of the latter), one teaspoonful or less of the solution being used in a litre of warm water.

E. CRESSWELL BABER, M.B.

NOTES ON BOOKS.

ARTICLE 187.

Guy's Hospital Reports. Edited by N. DAVIES COLLEY, M.A., M.C., and W. HALE WHITE, M.D. Vol. xliv., being vol. xxix. of the Third Series. London: J. & A. Churchill. 1887.

THE current number of the Guy's Hospital Reports contains a varied collection of papers, some of which are of considerable interest. The first and second on the list are biographies of the late Walter Moxon, M.D., and the late John Cooper Forster. The first, which is from the pen of Mr. Clement Lucas, is a most gracefully and sympathetically written account of the life of a man whose work and sayings will not soon be forgotten. Dr. Pye-Smith contributes a paper entitled 'Observations on Prognosis,' concluding with a number of aphorisms, of which a summary will be found on p. 56. Mr. Clement Lucas describes two unusual dislocations, (1) dislocation by rotation backwards at the wrist-joint. (2) Mid-manual dislocation backwards.

Mr. Dickinson Crompton's paper 'Reminiscences of Provincial Surgery under somewhat Exceptional Circumstances,' contains accounts of a number of cases met with in a long practice in the Midlands. Not only the surgery but the writing of the paper took place under 'exceptional circumstances,' as we gather from the following quotation. 'I am now getting cataracts in my eyes, and at the present moment do not see what my hand writes, but hope it forms the words my mind would dictate. It is a curious sensation, and is new to me within the present year. As I cannot read I suppose my mind goes back more easily, and perhaps more clearly into the past than it has had time to do before. This must be my excuse for writing, and it is a pleasant occupation.'

Mr. Campbell's encyclopædic paper on Diabetes Mellitus must next be mentioned, and Mr. Lane's two contributions to the anatomy and physiology of certain deformities, the last being 'illustrated by the Anatomy of the Charwoman,' a title which opens up fresh vistas of possibilities of anatomico-chirurgical papers. Mr. Davies Colley tabulates the cases of compound fracture of long bones which have come under his care in the past six years.

Two dental papers are contributed by Mr. Pedley, and Dr. Savage writes on the treatment of insanity.

Cases of hæmorrhage occurring during treatment by salicylate of soda are narrated by Dr. Lauriston Shaw. Mr. Dunn describes an instance of fractured pelvis, with rupture of urethra, extravasation of urine, and formation of urinary fistulæ, Dr. Goodhart cases of angina pectoris, Dr. Pitt one of Friedrich's disease, and Mr. Arbuthnot Lane some undescribed fractures of the lower extremity of the tibia or fibula which are not recognised during life.

An account of the specimens added during the year to the Pathological Museum, with the abnorma-

lities observed in the dissecting room, and the usual prize and pass lists complete the list of contents.

Bertram C. A. Windle, M.D.

Article 188.

Lexicon of Medicine and the Allied Sciences. New Sydenham Society. By Mr. Henry Power and Dr. Leonard Sedgwick.

The Fourteenth Part of the New Sydenham Society's *Lexicon of Medicine and the Allied Sciences* (based on Mayne's Lexicon) has just come to hand, and is most exhaustive in character. Not only does this work define the meaning of various terms, but in many instances a short note is given explaining the steps of an operation, or the use of a drug as well as its chemical properties and preparation; again, if 'Kidney' be looked up, there will be found all the various derivations of the word, then an anatomical and histological account of the organ, followed by its uses and functions, together with its development in man and its structure in the different classes among the lower animals. Further on, under the same heading, one can find, in alphabetical order, almost anything one could wish to look for connected with this organ. When complete, the work will be a most valuable addition to the library, not only of medical men, but of those scientists who are interested in medicine and the allied sciences.

Richard Neale, M.D.

NEW INVENTIONS.

A NEW SPECULUM.

Dr. Vidal lately showed at the Academy of Medicine a new kind of *speculum*, with movable valves, invented by M. Ch. Dubois.

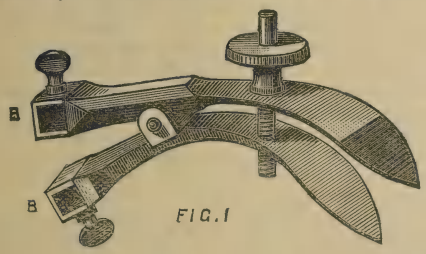
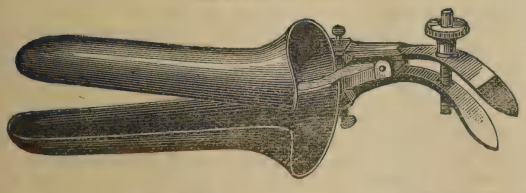


FIG. 1

This instrument is composed of a piece (fig. 1), which is destined to receive duplicate valves of different sizes, in the square BB. The valves are fixed by means of a screw. When the two valves are placed on this piece, the instrument is completed (fig. 2). By employing three sets of valves of different sizes, three different speculums are obtained—namely, a speculum for virgins, a speculum for operations, and a speculum for examination. M. Dubois has, moreover, constructed a handle (fig. 3) which receives each of the valves, to which it is

FIG. 2



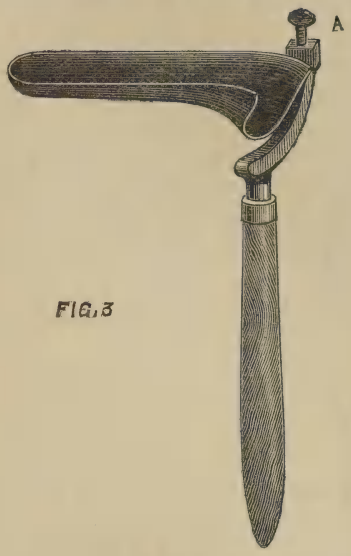


FIG. 3

fixed by the screw A. By this means the instrument may be employed like Sims' valves.

The advantages of this instrument may be summed up as follows:

It may be thoroughly cleaned. It comprises three speculums of different sizes, and six Sims' valves. The cost of the whole apparatus is less than that of the different instruments which it replaces.

DIETETIC NOVELTIES.

DEWAR'S WHISKY.

We have received samples of an old matured Scotch Whisky, prepared with a view to dietetic and therapeutic use by the well-known firm of James Dewar & Sons, Perth. For the guidance of the profession we append our analyst's report:—

I have carefully examined this whisky; it is free from fusel-oil, and there is not the slightest indication of the presence of deleterious compounds, often present in new whisky. It is fairly strong whisky, its alcoholic strength being considerably above the limit mentioned in the Sale of Food and Drugs Act Amendment Act. It is an excellent spirit, with the fine flavour and aroma peculiar to well-matured whisky. It is soft and mellow, and I can with confidence recommend it as a choice spirit for medicinal purposes.

R. H. Harland, F.I.C., F.C.S., Public Analyst.

NEW PREPARATIONS.

KRANZ'S FOOD OR 'PANIER BROH.'

We have received samples of this food, which has been introduced into this country by Messrs. Griffith and Co., 42 Cheapside. We have put it to some tests with delicate infants, which have proved very satisfactory. It is a clear, light brown powder, nutritive, and easily digestible, and may be used with advantage by sick and delicate persons generally and children of all ages. It is easily prepared, and makes a very palatable pudding. Dr. Thos. Gurney says:—'The result of my examination of Kranz's Patent Food and Condiment shows it to be an

excellent food for children and invalids, being adapted for old and infirm people, as well as children of advanced age. It is rich in nitrogenous, flesh-making elements, easily digested, and a good food for dyspeptics. It is well prepared, not only nutritious, but palatable; not more than 6 per cent. passes away as effete matter. I have also tried it practically, and can recommend it as a good food eminently adapted to supply a place in children's diet. I have personally examined its place of manufacture, and can testify that the premises are airy, its mode of preparation clean, and that there is no risk of it being impregnated with any dangerous element during its manufacture.

(Signed)

'Thos. Gurney, M.D., L.R.C.P., L.R.C.S.

'Physician to the City of London Dispensary, &c.'

KINGZETT'S 'BACTERICIDE.'

Under the above title, Mr. C. T. Kingzett, F.I.C., F.C.S., the managing director of the Sanitas Company, has introduced a new germicide, oxidant, and antiseptic. It is intended exclusively for use in all cases where the employment of an antiseptic or disinfectant, in surgical and medical practice is required. It contains as active principles 3 per cent. of mercuric chloride (corrosive sublimate), and 3 volumes peroxide of hydrogen. Care has been taken to combine these elements in such a form that the solution will keep permanently free from precipitation; a most important factor in such a preparation. It will prove germicidal to all bacteria and other micro-organisms, and destroy all toxic chemical products of micro-organic life by oxidation. 'Bactericide' admits of considerable dilution, and is put up in blue pint 'poison' bottles, sold at 2*s.* each, by the Sanitas Company. We believe that Kingzett's 'Bactericide' will prove of great service in general practice.

A NEW MEDICINAL WATER.

Under the name of 'Neurin,' Messrs. J. F. Edisbury & Co., of Wrexham, have introduced a new medicinal water, which will probably be appreciated by the public. We are informed by the makers that it was suggested to them by an 'eminent physician and specialist in nervous diseases.' Each bottle (of the size of half champagne bottles) contains ten grains of mixed bromide salts in effervescence with carbonic acid gas, bottled at a pressure of 100 lbs. Although introduced as a medicinal water, there is no gastronomic reason why Neurin should not be used as a table water, for it has none of the unpleasant taste native to many medicinal waters. It is sharp and saline in character, not unlike seltzer, and refreshing to the system. It mixes very well with alcohol, and will probably be found useful in nervous diseases and for insomnia. Taken under advice at night by persons suffering from sleeplessness, it should prove useful, and, as its price is moderate, it will, if it answer expectation obtain public patronage.

F. C. CALVERT & CO.'S NEW PREPARATIONS.

Messrs. F. C. Calvert & Co., of Bradford, Manchester, call our attention to their new toilet soaps, prepared with carbolic acid or phenol and camphor. The Camphorated Carbolic Anti-Mosquito Soap is admirably adapted for warm climates, and if used at night will act as a deterrent against mosquito bites. It will also be found valuable as a preventive of some skin affections. It is useful for the cure of chapped hands, for the bath, and for cleansing the hair, and it may be used with advantage where zymotic diseases are prevalent.

The Carbolic Household or 'Prickly Heat' Soap is a good specimen of a household soap, coming between best yellow and toilet soaps, as well as possessing its disinfecting qualities. It is agreeably perfumed and contains 1 per cent. of pure carbolic. It was originally introduced as a preventive of prickly heat and irritation of the skin, so often experienced in warm climates. This soap is of good colour and general appearance, and is sent out in small bars at 6*d.* and 1*s.* each.

Messrs. Calvert also submit a medicinal soap put up in boxes containing one tablet each, prepared with a much larger proportion of carbolic than is present in the toilet soaps.

One of the firm's newest introductions is their carbolic or phenol lozenges, put up in ornamented tin boxes. These lozenges are likely to be found very useful in all cases where the exhibition of carbolic acid is necessary.

MISCELLANY.

The Parkes Museum.—H.R.H. the Duchess of Albany has graciously consented to become patroness of the Parkes Museum, of which H.R.H. the Duke of Albany was president until his decease.

At a recent meeting of the *Conseil d'Hygiène du Département de la Seine* M. Lancereaux reported on a fatal case of lepra which occurred at the Hôpital St. Louis in November.

M. Riche is engaged in studying the action of nickel on the human economy. From his experiments he concludes that nickel is absorbed without danger by guinea-pigs and dogs. He believes that nickel vessels may be fearlessly employed for holding or preserving aliments.

Night Medical Service.—The Sanitary Commission of the Municipal Council of Vienna propose engaging two doctors for each *arrondissement* to render medical assistance during the night. Before deciding upon this measure the Commission intend ascertaining in what cases and under what circumstances medical men refused to give their services during the night.

The Donders Institute.—A committee, composed of sixty-seven of the most eminent scientific men in Holland, have decided to found a scientific institute, under the patronage of Professor Donders. This institution will bear the name of the distinguished professor, who has for many years been director of the Laboratory of Physiology at the University of Utrecht.

M. Gripouilleau has invented an artificial arm, costing only 40 francs, which will allow the wearer to dig, load, and wheel a barrow, mow, &c. This arm, which is applied to the shoulder where the member has been amputated, is made of wood, zinc, and sheet-iron. It will prove of immense service to labourers who have lost an arm.

The first number of the *Revue Médico-Pharmaceutique* was published in Constantinople on Jan. 31. It is designed to make known in Europe the work done by the physicians and pharmacists of the East, and at the same time to give a fair reflex of the progress made in medicine and pharmacy throughout the world. The new journal is edited by M. Pierre Apéry.

The cultivation of cinchona as a private enterprise is extending in the Darjeeling district in a highly satisfactory manner. There are now four private plantations there,

possessing between them 2,098,580 plants, or nearly half as many as the Government Plantation. The gross yield of the former in 1886-87 was 30,000lb. of bark, against 1,760lb. only in the preceding year.

Fels' Germicide Soap is a toilette preparation containing various antiseptic substances, including naphthols, eucalyptus, and the perchloride of mercury ($\frac{1}{1000}$), for domestic disinfection. It is difficult to say how much disinfectant power is to be attributed to the first two, but the sublimate in the proportion of $\frac{1}{1000}$ is a powerful though inoffensive germicide. These ingredients are incorporated in a good soap basis with an agreeable odour, and the tablets are well adapted for the lavabo of the medical man and the wash-stand of the nurse, as well as for the cleansing of articles of clothing, &c., from infected sources.

Dr. Monin furnishes the following statistics concerning the number of preventive inoculations for rabies practised in Warsaw by Dr. Bujivid, and the results observed. From the beginning of 1887 to July 1 220 persons were inoculated. In 85 per cent. of the cases these persons were proved to have been bitten by animals suffering from rabies. In 15 per cent. this fact was not certified. Thirty-five persons who were bitten were not inoculated, owing to the insignificant nature of the bites. Two of the patients inoculated succumbed; the mortality was therefore 1·06 per cent. This proportion is similar to that shown by the results of similar experiments at the Institut Pasteur.

Prize Essays on Medico-Legal Subjects.—The Medico-Legal Society of New York announces three prizes of the value of 100, 75, and 50 dollars respectively, for the three best essays on any subject within the domain of medical jurisprudence or forensic medicine. The essays are to be sent to the President of the Society by April 1, with a motto, the author's name being sent under separate cover. Candidates are required to join the society as honorary, corresponding, or active members. Further particulars may be obtained from the President, Clark Bell, Esq., 57 Broadway, New York.

Electric Executions.—In the *Medical Press*, January 1888, p. 91, an article deals with the subject of carrying out the ultimate sentence of the law by means of electricity. The Americans have turned their attention to this subject, and a contrivance known as the Hayes-Garrison apparatus has been designed, which promises to attain the desired end. It consists of a copper band, placed round the brow of the condemned person, and presses strongly on the nape of the neck, a zinc plate, on which the victim stands, being the other electrode. On the contact being established death is instantaneous. M. Mendez has designed a similar apparatus, except that it is in gutta-percha, and the poles press on either temple. It is estimated that a battery of 500 cells would be amply strong enough for the purpose, and it could be used for other purposes when not required by the law. The author adds that one may put up with an occasional 'wobble' in the electric light, but the science of electricity must be sufficiently advanced to prevent any mistake being made when life has to be disposed of, before one can think of using it for such purposes.

French Surgical Congress.—The third session of the French Surgical Congress will be held in Paris, from March 12 to 17, in the large amphitheatre of the Administration de l'Assistance Publique, 3 Avenue Victoria. Professor Verneuil will preside. The following questions are down for discussion: 1. The Treatment of Gunshot Wounds of Viscera. 2. The Value of Radical Treatment of Hernia as regards Permanent Cure. 3. Treatment of chronic Empyema. 4. Recurrence of Malignant Growths after Operation: its Causes and Prevention. Surgeons wishing to take part in the Congress are requested to communicate with the General Secretary, Dr. S. Pozzi, 10 Place Vendôme, Paris. The subscription is 20 francs.

The laicisation of the Paris hospitals will shortly be completed. The religious staff at the Charité has been dismissed. The laicisation of the Hôtel Dieu and the Hôpital St. Louis will follow in the course of the year. The laicisation of the hospitals was begun in 1878, with the Hôpital Laënnec. Since that time the administration of the Assistance Publique has organised a training school for nurses at the Hôpital de la Pitié. The nurses are taken from here to substitute the religious nurses whenever a fresh hospital is laicised. The post of superintendent of a ward is only confided to those who have obtained a certificate at the examinations proving them competent to undertake such an office. The contract made between the Administration of the Assistance Publique and the religious orders which have hitherto supplied the hospital nurses gave the option to either side to annul the engagement if it appeared advisable.

Colour Blindness.—In a paper on colour-blindness, contributed to vol. v., part 2, of the proceedings of the Bristol Naturalists' Society, Prof. W. Ramsay suggests that the particular defect which causes colour-blindness may lie in the brain, not in the eye. Certain persons, he points out, are incapable of judging which of two musical tones is the higher, even when they are more than an octave apart. Yet such persons hear either tone perfectly; the defect is not one of deafness. 'It must be concluded,' says Prof. Ramsay, 'that in such a case the brain is the defaulter. And it may equally well be the case that the inability to perceive certain colours is not due to a defect in the instrument of sight—the eye, but to the power of interpreting the impressions conveyed to the brain by the optic nerve. If this is the case, the problem is no longer a physical one: it falls among those with which the mental physiologist has to deal.'

The Lunatic Asylum at Exeter.—The first report in connection with the new lunatic asylum at Exeter has been issued, and the document covers a period of fifteen months. The total number of admissions was 230. Of these 41 have been discharged and 15 have died, leaving 174 under treatment. A table shows the occupations of the 77 patients admitted during 1887. Three were farmers, two each of drapers, tailors, watchmakers, and labourers, two the wives of farmers, and some thirty others were divided among various trades and professions. Nineteen were of no occupation. The total receipts from boroughs was £5,600. Exeter contributed £3,614, and Tiverton comes next with £789. On the debtor side of the account there appears £1,409 for provisions, £40 for wine, spirits, and beer, and £1,141 for necessaries. The farming account gives a profit on the year's working of £37 12*s.* The average weekly cost for maintenance was 12*s.* 0½*d.* per head. Dr. Rutherford observes that insanity is in many cases a curable disease; but that the chance of recovery is greatly lessened if the patient is not put under treatment in the early stages of the disorder.

The National Pension Fund for Nurses.—This society has now been incorporated, and its memorandum of association has been registered. The memorandum of articles is signed by Lord Rothschild, Mr. Henry Hucks Gibbs, Mr. E. A. Hambro, and Mr. Junius S. Morgan, the four merchants who have contributed each £5,000 towards the £20,000 which had to be deposited with the Court of Chancery as a security for the proper working of the fund. It is further signed by Mr. F. C. Carr Gomm, Chairman of the London Hospital; Mr. Percival A. Nairne, Deputy Chairman of the Seamen's Hospital; Dr. Bristowe, F.R.S., Senior Physician of St. Thomas's Hospital; Mr. Thomas Bryant, Senior Surgeon of Guy's Hospital; and Mr. Henry C. Burdett, the founder of the fund. The Council includes Mr. John Watney, of the Mercers' Company; Mr. Brudenell Carter, Ophthalmic Surgeon to St. George's Hospital; Dr. J. C. Steele, Medical Superintendent of Guy's Hospital: Mr. Alfred de Rothschild, Mr. Clifford Wigram, Mr. W. H. Burns, Mr. Charles Rawlings, and others.

The Scientific Study of Tuberculosis.—A Congress composed of physicians and veterinary surgeons, for

the scientific study of tuberculosis in human beings and in animals, will be held at the Ecole de Médecine, Paris, from July 25 to July 31, 1888. The following questions will be discussed: 1. The dangers resulting from the use of the flesh and milk of tuberculous animals. 2. The special aptitudes of certain human races and animal species for contracting tuberculosis. 3. The manner in which the tuberculous virus is introduced and propagated in the system, and the prophylactic measures to be adopted. 4. The premature diagnosis of tuberculosis in human beings and in animals. Besides the questions above enumerated, the Congress will give special attention to the following: The hereditary character of tuberculosis in human beings and animals; its transmission from one human being to another, or from an animal to a human being, &c. The different manners in which experimental tuberculosis is developed, according to the quality and quantity of virus inoculated. The different characteristics of tuberculosis in different animal species. The means of distinguishing lesions produced by Koch's bacillus from the granulations and inflammation due to different microbes (zooglœa, bacteria of contagious pneumonia in pigs, aspergilli, &c.) to animal parasites or foreign substances. Tuberculous lesions accompanied by other microbian lesions. The manner in which giant-cells and tuberculous islets are formed. The evolution of local tuberculosis. The destructive agents of Koch's bacillus. Local and general methods of checking the spread of experimental tuberculosis. The action of surgical therapeutics in tuberculous affections. All communications concerning the Congress should be addressed to Dr. Petit, general secretary, 11 Rue Monge, Paris. Subscriptions to be sent to M. G. Masson, treasurer, 120 Boulevard St. Germain, Paris.

QUESTIONS SET FOR THE QUARTERLY EXAMINATION FOR THE TRIPLE QUALIFICATION OF THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

TRIPLE QUALIFICATIONS.

Questions in Elementary Anatomy.

All of which are to be answered.

I. Enumerate the foramina which exist in the sphenoid bone, and name the structures transmitted by them.

II. Describe the cutaneous nerve supply of the toes.

III. Give the course, relations, and branches of the anterior interosseous artery.

IV. Give the origin, insertion, and nerve supply of the following muscles:—Gluteus maximus, tibialis anticus, supinator brevis.

Questions in Chemistry.

Four questions, all of which are to be answered.

I. Write the formulæ of the following substances:—Lead acetate, mercuric chloride, black oxide of manganese, magnesia, peroxide of hydrogen.

II. Explain the term 'specific gravity' as regards solids and liquids. A sp. gr. bottle, holding 50 grams. of water, was found to hold 50·96 grams. of urine: Calculate the sp. gr. of the urine.

III. How is 'yellow prussiate of potash' manufactured? Give its chemical name and formula. What takes place when chlorine gas is passed into a solution of the salt?

IV. What takes place when the following re-agents are added to separate portions of a solution of 'lead' salt—HCl, H_2S, KI, HSO_4?

Questions in Advanced Anatomy,

All of which are to be answered.

I. Describe the lumbar plexus, and name the branches derived from each of the nerves.

II. Name the cartilages of the larynx, and describe the largest of these, indicating the points to which muscles and ligaments are attached.

III. Give the course, and describe the branches of the first part of the internal maxillary artery.

IV. Specify the nerve supply of the following muscles:—Levator labii superioris, levator palpebræ, digastricus, sternomastoid, rectus abdominis, rectus externus, rectus femoris, stylo-glossus, stylo-pharyngeus, thyro-hyoid, sterno-thyroid and lingualis.

Questions in Physiology,

All of which are to be answered.

I. Give an account of the nerve mechanism of the heart—intrinsic and extrinsic.

II. Describe the manner by which the 'arterial tension' of the carotid artery has been estimated.

III. What are the chief layers of the Blastoderm? and mention the most important structures and organs formed from each.

IV. How is animal heat produced? what are its normal limits in man? and how is it maintained within these limits?

Questions in Materia Medica,

Three questions, all of which are to be answered.

I. What part of the hyoscyamus plant is used in medicine Mention the order to which it belongs, and the various preparations and doses.

II. Mention the preparations and doses of magnesia.

III. State the composition of the liquor hydrargyri perchloridi, and its dose.

Questions in Medicine,

Three only of which are to be answered.

I. Give the etiology, symptoms, pathology, and treatment of exophthalmic goître.

II. Mention four diseases of which polyuria is a symptom, and give the differential diagnosis of these from one another.

III. Enumerate the symptoms and signs which might be present in a case of aneurism situated at the junction of the arch of the aorta with the descendlng aorta. Explain the treatment of such a case.

IV. Give the etiology, symptoms, pathology, and treatment of Asiatic cholera.

Questions in Therapeutics.

All of which are to be answered, including the Prescription.

I. How may hæmatemesis be most effectively treated? Explain the rationale of the treatment selected.

II. Sketch a dietary to be used by a person of pronounced gouty constitution.

III. Give the appropriate treatment for three forms of diarrhœa.

Prescription.

To be written in unabbreviated Latin, the directions in English.

Prescribe a draught containing bromide of potash, hyoscyamus, and chloroform water.

Questions in Surgery,

All of which are to be answered.

I. Osteoma—(1) What varieties present themselves? (2) Describe the exostoses of the great toe, and of the skull. (3) What treatment would you adopt for each?

II. Distinguish (1) pathologically, and (2) symptomatically, chronic rheumatoid arthritis, gonorrhœal rheumatism, and Charcot's ataxic arthritis.

III. Hydrops of the knee—Give (1) its causes; (2) its symptoms; (3) its treatment.

IV. State (1) the varieties of hare lip, (2) the period for operating, (3) the mode of operating.

Surgical Anatomy,

One of which only is to be answered.

I. Describe the anatomy of the parotid gland, with special reference to excision of parotid tumours and the risks of that operation.

II. Explain the arterial and venous distribution to the rectum, and the arrangement of sphincters and levator ani.

Questions in Midwifery and Gynæcology.

Three Questions must be answered, of which the last must be one.

I. Spurious Pregnancy—State the circumstances in which it occurs, its causes, symptoms, and diagnosis.

II. Describe the four positions of the fœtal head at the brim exactly, numbering them according to Naegele. State their relative frequency.

III. State the views held as to the contractions of the uterus throughout pregnancy, their diagnostic value, and how they are accounted for.

IV. Explain the occurrence of lacerations of the cervix uteri, the complications they may give rise to, and the methods of treatment.

Questions in Medical Jurisprudence and Hygiene.

Four Questions, of which Three are to be answered, and in these 3 and 4 must be included.

I. Mention the signs of death. Describe the characters of the early stages of putrefaction; and state the period of its oncoming in various parts of a body exposed in a mortuary at this time of year.

II. Describe the differences produced by the application of heat to the body, before and after death.

III. What are the more common poisonous salts of copper? How may copper accidentally gain access to food or drink? What are the symptoms produced in acute poisoning therefrom, and how may the poison be detected in the contents of the stomach?

IV. Describe the process of disinfecting the room, bedding, &c., of a person who had lain in it ill of scarlet fever, giving your reasons for the various steps taken.

The London Medical Recorder.

Article 189.

REESE ON SUICIDE IN RELATION TO INSANITY AND LIFE ASSURANCE.

The subject of suicide in its relation to insanity has been well treated in a lecture by Dr. John J. Reese, Professor of Medical Jurisprudence in the University of Pennsylvania, published in the *American Medical News* of Jan. 21.

Dr. Reese argues at length against the notion that suicide is in itself a proof of insanity. It seems surprising that any one acquainted with history should hold such a view. There is, however, no doubt that a large proportion of those who take away their own lives are really insane. From the statistics furnished by Morselli in his classical work, *Il Suicidio*, it appears that this proportion is about one-third. In Italy he tells us 50 per cent. of all the suicides are due to pathological causes. Pellagra is a very common cause. Melancholia is the form of insanity in which attempts at self-destruction are most to be dreaded. Such patients sometimes reason forcibly upon the wisdom of putting an end to a life weighed down by insupportable misery. Such cases add much to the cares of medical superintendents of asylums, though they are sometimes rewarded by being able to restore their patients to their families in a sane and cheerful state of mind.

As might be expected, the frequency of suicide is much influenced by religious belief. Amongst the adherents of those faiths which strongly condemn self-murder it is not so often met with. Morselli's statistical tables clearly show that it is rare in strictly Catholic countries, such as the Spanish Peninsula and Southern Italy. In Ireland, where it is also rare, the commission of suicide may be confounded with the collection of rents. Self-murder is strongly condemned in the Koran, hence it is rare amongst Mahomedans, though they are encouraged to throw away their lives in battle against the infidels. The Brahminical religion encouraged widows to burn themselves with their husbands' dead body. It is recorded that as many as fifty of the wives and concubines of a Hindu grandee who lived in the days of Akbar destroyed themselves on his funeral pyre. It does not appear that on ordinary occasions the Buddhist religion encourages suicide; but, as death holds out at worst the prospect of a change of being, Buddhism does not act as a deterrent, hence suicide is far commoner with the Chinese and Japanese than with other nations.

The frequency of suicides is steadily increasing in Europe and North America, and this is no doubt owing to the spread of materialistic views. Where death is considered the end of all suffering, the last and most thorough opiate to misery, it is not surprising that it should be sought by those who have given up all hope of escape from disease and misfortune. Yet so great is the love of life, and so inexhaustible is hope in the human breast, that it is not at all likely that suicide could ever become very frequent, even if Materialism were the universal belief. It is in great cities like Paris, Berlin, and Vienna that the proportion of suicides is highest. Dr. Reese has called attention to some instances in which men have deliberately insured their lives for large sums, and then made away with themselves in order to provide for their families. He mentions the celebrated Dwight case, which occurred about two years ago at Binghamton, N.Y., involving several hundred thousand dollars of insurance money, in various offices. 'This case has been tried in the different courts, and we now hear that it has been recently compromised. The other case is that of Tyler, of Norwalk, Conn., which occurred within the present year. This man, having spent a fortune in profligate living, applied within the space of six months for an aggregate sum of 400,000 dols. of insurance on his life, having previously announced his intention to effect this large insurance for the benefit of his various creditors, and then to kill himself. By false statements to the offices to which he made application, he succeeded in his design. He then writes to his mother of his intention to take his life; after which, he comes to Philadelphia: from which city he again communicates to a friend his suicidal purpose, under an assumed name; and, finally, he returns to Norwalk, and is found in the morning dead in his bed, from an overdose of morphine, leaving a memorandum upon his table. The majority of the insurance companies, I am informed, are defending their cases in the courts upon various grounds—amongst others, on that of conspiracy between the deceased and the creditors.'

'In each of the above cases to which I have made brief allusion (observes Dr. Reese) there are certainly very strong reasons to suspect voluntary suicide to have been the true cause of death, and that, too, without the slightest suspicion of insanity on the part of the deceased.

'You will notice a most significant fact in these and in analogous cases—viz., that the insurance on the life of the person had been but lately effected, and usually for a considerable amount, and in various offices; and, further, that only one or two premiums had been paid before the suicidal death occurred.

'Now, I do not think that we need be much surprised at such occurrences. Why should not such an individual, pressed down by the burden of some enormous debt, which he has been vainly hoping to pay (if restrained by no belief in, or dread of, a future judgment)—why, I say, should he *not* embrace the tempting offer to insure his life for an amount which will not only repay his indebtedness and rescue his name from dishonour, but at the same time save from poverty and want those whom he loves better than himself?'

Dr. Wynn Westcott, in his book upon suicide, gives some information about the attitude of British assurance companies to the suicide. In six offices the policy is rendered void by suicide, though the money paid in need not be forfeited. In the prospectuses of nine companies no mention of suicide is made, but in the majority of the companies the policy is not made void by suicide after payments running from one year up to five. In the case of a disputed claim owing to suicide medical advice would no doubt be asked as to whether the suicide was insane or not. It is well known that English juries are very ready to declare the act of self-destruction to have been committed when in a state of unsound mind, in order that his body should be

buried with religious rites. In Scotland, Presbyterians do not object to a suicide being buried in the churchyard. It appears that an English jury, by declaring a suicide insane to get him buried in consecrated ground, might without intending it secure, or help to secure, a policy of insurance for his heirs. W. W. IRELAND, M.D.

ARTICLE 190.

FENOMENOFF ON THIRTY-FOUR CONSECUTIVE LAPAROTOMIES.*

DR. NIKOLAI N. FENOMENOFF, professor of obstetrics and gynæcology at the Kazan University, has just published (*Vratch*, Nos. 1, 2, and 3, 1888) a very interesting report on his thirty-four consecutive laparotomies performed between March 3, 1884, and May 5, 1887 (the last twenty-six during a twelvemonth), with twenty-seven recoveries and seven deaths. He tabulates his operations as follows:

	Recovered.	Died.	Total.
1. Ovariotomies, in all of them	18	4	22
a. Ovarian cysts	15	1	16
b. Cysts of broad ligaments	3	3	6
2. Myotomy with removal of appendages	—	1	1
3. Salpingotomy	1	—	1
4. Salpingoectomy with ovariotomy	1	—	1
5. Tait's removal of appendages	1	—	1
6. Castration for myoma	1	—	1
7. Second laparotomy	1	—	1
8. Supravaginal amputation of the uterus with removal of appendages	1	—	1
9. Laparotomy for extrauterine gravidity	1	—	1
10. Cæsarean section	—	1	1
11. Porro's operation	—	1	1
12. Exploratory laparotomy	2	—	2
Total	27	7	34

Causes of death are classed thus: *a*, septicæmia, four cases (one myotomy, one ovariotomy, two after partial excision of intraligamentary cysts); *b*, double pneumonia, one; *c*, exhaustion, one (Cæsarean section); and *d*, unknown, one.

In every one of the cases the strictest possible antiseptic rules, including the most extreme cleanliness, were observed from the beginning to the end, in regard to all persons and objects concerned in the individual case. Some brief details, illustrating the general management of laparotomic cases, as practised in Dr. Fenomenoff's clinic, may prove of interest to the British reader from more than one point of view. Given a case to be operated upon, to begin at the beginning, on the day before the operation-day, a male attendant goes to the *baniа* (Russian hot water and vapour bath), carefully washes himself, puts on therein a fresh white linen dress, and immediately afterwards washes out the operation-room (ceiling, walls, and all) by means of a hydropult, first with ordinary water and then with a solution of sublimate corrosive (1 to 2,000). The preparation of the room is finished by the disinfection with a 5 per cent. carbolic (steam) spray playing for three hours in the evening, and for 1½ hours in the morning, before the operation. The instruments, solutions, sutures, and everything necessary for the next day are prepared, carbolised, sublimatised, &c., by assistants on duty; also immediately after their visit to the *baniа*. In the morning before the operation, all concerned in it, and spectators, whose total number is limited usually to 4, meet at the *baniа*, their invariable *rendezvous*, and, having thoroughly washed their bodies and put on a special costume (white trousers and aprons, India-rubber over-shoes instead of boots, &c.) go *in corpore* directly to the place of their destination. The patient is still more scrupulously prepared for her 'crucial day.' For several days before the latter the patient takes a hot bath with soap daily, and has her bowels cleansed by means of aperients and enemata, and disinfected by the internal use of salicylates or resorcin. On the eve of the operation-day, her pubic hairs are shaved clean, and then her abdomen is most carefully washed (by means of a brush) with plenty of soap, and subsequently with a carbolic solution, to be ultimately painted with an ethereal solution of iodoform, and covered with a carbolised gauze bandage. The latter is removed only when the patient is on the operation-table. Before the incision, the whole abdomen is once more brushed out with soap and hot water, and subsequently with carbolised water, and again freely painted with the iodoform solution.

In all but one case the pedicle was treated after the intraperitoneal method (ligature) without any drainage. In one case, in that of Porro's operation, the pedicle was fixed in the lower angle of the abdominal wound, the patient dying from double pneumonia on the eleventh day.

The abdominal incision was invariably median, and as free as the necessities of the case required. The tumour was extracted either intact, or, when large, after diminishing its size by means of a knife.

The adhesions were treated, on the whole, without any special ceremonies. The author did not observe any untoward results, even when he happened to break up fairly firm and very extensive (reaching from the diaphragm down nearly to the pubes) adhesions between the tumour and anterior abdominal wall. 'The danger of hæmorrhage in similar cases seems to be considerably exaggerated,' he says. Discussing this point, Professor Fenomenoff draws attention to the fact that a morbidly altered adherent peritoneum may be easily mistaken for a wall of the tumour, and hence, on breaking up the adhesion, can be detached by the surgeon's hand from the subperitoneal cellular tissue. The mistake may take place the more easily that, on one side, on cutting into such a peritoneum there frequently escapes a gelatinous fluid, and even gelatine masses, which circumstance may naturally enough lead the surgeon to suppose that his incision has penetrated into the interior of the cyst, while, in reality, he has only opened the peritoneal cavity. On the other hand, a peritoneum altered in this way is apt to be very easily separated from the subjacent tissues. In case of such accidents the author always 'freely excised fairly extensive portions of the degenerated peritoneum, thus leaving the anterior abdominal wall stripped of its serous covering for a considerable area.' He has never yet had any ground for repenting having taken that line of conduct. We must add, however, that the author still leaves open the serious question whether the surgeon is justified in detaching and excising a degenerated parietal peritoneum intentionally and deliberately.

The operation was always made under chloroform (alone, or combined with a hypodermic injection of one-fourth grain of morphine) and lasted from twelve to ninety minutes. The toilette of the peritoneum consisted either in sponging, or (in cases of ruptured cysts, &c.) in washing out the peritoneal cavity by means of filling it with a warm 2 per cent. borax, or

* FENOMENOFF, PROFESSOR NIKOLAI N.—Thirty-four Laparotomies. (*Vratch*, Nos. 1, 2, and 3, 1888.)

1 per cent. carbolic solution, till the fluid came off quite clear.

The dressing was changed—unless some special indications were present—on the tenth or eleventh day, when also sutures were removed. The patient was allowed to get up about the fourteenth day, with an abdominal belt (the latter to be worn for about a twelvemonth). Tapping the tumour was not once practised, either for diagnostic or any other purposes. As far as ovarian and ligamentary cysts were concerned, the author's surgical behaviour was always guided by the postulate that a cyst of any size, when once its presence has been diagnosed, is to be removed without any unnecessary delay, whatever the patient's age or general state may be (putting aside exhaustion by some intercurrent disease, such as cancer, phthisis, &c.).

As to the treatment of diseases of the Fallopian tubes, Dr. Fenomenoff seems to generally share Mr. Lawson Tait's opinions. Amongst other things on the point, he adduces a severe case of hæmatosalpinx and chronic pelviperitonitis with periodical exacerbations, where he thoroughly removed the appendages after Tait's method. The results were indeed brilliant. The patient, aged 34, formerly a helpless and seemingly hopeless cripple—bed-ridden for months and only with difficulty creeping about when out of bed, and, in addition, quite incapable of marital intercourse on account of its giving rise to agonising pain, and, occasionally, to hæmorrhage—in about two short months after Tait's operation, was transformed into a healthy and strong woman, a cheerful and active worker, and a good wife.

Referring to the latter circumstance, Professor Fenomenoff lays down a categorical proposition to the effect that 'neither ovaries, nor Fallopian tubes, nor uterus itself can possibly be regarded as necessary for the existence of sexual desire and its satisfaction through coitus, the primum movens being to be sought at some other part of the animal system.' In support of this statement he quotes, beside the case given above (*a*) four other cases from his practice, those of uterine cancer, where sexual desire and pleasant sensations accompanying coition remained fully unaltered after a complete excision of the diseased womb and intact tubes and ovaries; and (*b*) a remarkable case of castration for pelvic peritonitis, published by Professor V. V. Sütügin (*see* the reporter's note).

The author mentions also that in several cases where he had completely removed both ovaries and Fallopian tubes with a large portion of the broad ligaments, there was observed menstrual hæmorrhage which recurred two or three times after the operation, at regular intervals, though in lessened quantity, the fact which evidently cannot be explained on the ground of the hypotheses in vogue, according to which the menstruation in similar cases is dependent upon an incomplete removal of ovaries or tubes.

In eight of his laparotomic cases the author carried out some observations concerning the influence of the operation on the course of the temperature in the abdominal cavity. He found that in a majority (in five out of eight) of the cases the temperature fell during the operation, the decrease varying from 0°·1 to 1°·2 C. In one case it remained unaltered all through; in two it rose 0°·1 and 0°·2 C.

It is worth while to note the following interesting facts:—1. In some cases where the operation was followed by extremely violent and otherwise intractable vomiting, the latter most rapidly ceased after the administration of hot tea (prepared after the Russian method—that is, a simple infusion of tea-leaves, of moderate strength, in comparison with the British beverage). In septicæmic cases, however, vomiting did not yield to any remedies; on the contrary, it became ever more frequent and profuse, the ejected matter assuming at the same time a chocolate colour. This phenomenon is regarded by the author as a most grave and characteristic sign which justifies an expectation of a rapid development of all other septicæmic symptoms. In all the author's laparotomic cases, to prevent vomiting in general, the patient receives, during the first three days after the operation, no food except cream-ice, which is said to be invariably very well tolerated. On the fourth or fifth day she is allowed beef-tea, or milk, or fish soup, and a little wine. Later on, poultry, semolina gruel, &c.

2. In meteorism very good results are obtained by the author from the introduction of a long thick sound high up into the rectum, the gases swiftly escaping in great quantity, and thus relieving the woman.

3. The patients, especially the exhausted ones, are allowed by him to lie in bed, not only on their back, but also on their side. The measure is adopted 'with the object of preventing bed-sores, which in weakened individuals sometimes develop with striking rapidity—*e.g.* on the second day after the operation.'

4. In one of the cases where a vesico-vaginal fistula was present and the ureteral orifices were exposed, Professor Fenomenoff carried out a series of observations in regard to the action of the ureters, and came at the following results. 1. The urine was expelled from the orifices by gushes at irregular intervals, varying from several seconds to a minute. 2. The discharge occurred either almost simultaneously on both sides, or on this or that side alone alternately; the latter phenomenon was observed more often than the former. 3. The urine was ejected in varying amounts and with varying strength. The jet sometimes was fairly strong. The site of the ureteral orifices usually became somewhat prominent during the discharge. 4. As to qualitative composition, no difference was observed between the urine from the right ureter and that from the left one.

[On this point, therefore, the author's results are somewhat different from those published by Dr. A. I. Zamshin (*see* the *Brit. Med. Jour.*, June 4, 1887, p. 1,228). Professor V. V. Sütügin's case, mentioned above and published in the *Vratch*, No. 42, 1886, p. 746, refers to an anæmic and weak woman of 25, who began to menstruate in her fourteenth year, soon afterwards married a man with chronic gonorrhœa, was normally delivered of her only child at 15½, and ever since suffered from greenish vaginal discharge, agonising pelvic and inguinal pain increasing on movement, menstruation, and especially after each coition; constipation occasionally alternating with attacks of diarrhœa, fairly high fever during exacerbations, &c. In addition, she had from time to time epileptic fits (from her childhood). Medical treatment gave partial relief in the earlier stages of the case, but later on it proved wholly powerless to make the patient's life worth living. Surgical treatment was resorted to as the last resource. The operation was extremely difficult on account of extensive peritonitic adhesions and false membranes, as well as of displacement and distor-

tion of the parts removed. The ovaries were found to be shrunken; there was double pyosalpinx. The patient's general state was strikingly relieved by the castration; indeed, she ceased to be an invalid, and could now even 'enjoy her life.' Coition became quite free and painless, and was now accompanied by 'normal pleasant sensations,' as in the times before her disease (according to the statements of herself and her husband). Catamenia continued to recur at regular intervals (six times up to the date of the paper), at first in a rather lessened, but later on in a considerable, quantity. Her epileptic fits, however, did not cease, and even, seemingly, increased in their frequency (three fits in two months, against one in a twelvemonth). Pointing to the occurrence of menstruation after a thorough removal of the oviducts, Professor Sütügin emphasises that his case speaks against Mr. Lawson Tait, who attributes to Fallopian tubes a most essential part in the menstrual function. The patient's normal sexual state (including menstruation) is ascribed by the author to 'some trifling residues of the left ovary, which might not have been removed by the operation.'—*Rep.*]

V. IDELSON, M.D.

ARTICLE 191.

JACOBI ON THE THERAPEUTICS OF INFANCY AND CHILDHOOD.

IN this paper (*Archives of Pediatrics*, vol. v., No. 2) Professor Jacobi continues his remarks upon the feeding of sick children (*see* LONDON MEDICAL RECORDER, p. 55). The treatment of dyspepsia in infants consists chiefly in abstinence or in very great care in the preparation of the meals, on the lines indicated in the earlier part of the paper. The gastric juice of infants who have been fed artificially is liable to be hyperacid; to combat this, a few grains of an alkali should be given some minutes before each meal. The readiness with which vomiting is induced in infants is due to the cylindrical shape and the vertical position characteristic of the stomach at that age. The treatment consists in giving food less in quantity and at longer intervals, and in keeping the child very still for some time after meals. When milk, which has been swallowed for an appreciable time, is vomited uncoagulated, the stomach is not in a normal condition; in such cases anti-fermentatives, as nitrate of silver, bismuth, or resorcin are indicated, though sometimes antacids suffice. Chronic gastric catarrh must be treated according to its cause and concomitant conditions; but in all cases the number of meals and the amount of food must be adapted to the digestive powers, and the child must be made to eat slowly; the food must be tepid, not too dilute, and must contain but small quantities of sugar, fat, and starch.

Ulceration of the stomach or duodenum demands that the organs be kept alkaline; but the carbonates are contra-indicated for repeated use because carbonic acid gas increases peristalsis: the best antacid is calcined magnesia in doses of one to two grains every hour or two in tepid or hot water; when more powerful action is required, carbonate or phosphate of calcium, with or without bismuth, may be added. Lime-water is far too feebly alkaline to have any beneficial antacid effect. The medicinal treatment must be continued for weeks or months. No solid food must be given; milk must be drunk slowly and interruptedly, or it will coagulate in large indigestible lumps. It should be boiled in the morning and afterwards made tepid every time it is given, and mixed with salt and a cereal decoction. But the toleration of infants for food is almost infinitely various, and the form most suitable must be determined by experiment; besides the above, strained oatmeal or barley gruel, rice, or arrowroot water, and stale wheat bread, raw beef scraped, buttermilk, koumiss, matzoon, or peptonised milk are all suitable in different cases.

For acute gastro-enteritis, the treatment consists in abstinence for six hours or more, followed by mucilaginous or farinaceous decoction in teaspoonful doses, without milk in any form. A good preparation is made with barley water, 5 oz., brandy or whisky, 1 to 2 drams, the white of one egg, and a little salt and sugar; a teaspoonful every five to fifteen minutes. Later, a tablespoonful of boiled milk may be added. Abstinence is better than ice for vomiting as the latter stimulates peristalsis. In advanced cases, when the copious discharges have reduced the blood to a semi-inspissated condition, it becomes necessary to introduce liquid into the circulation by administering water through the mouth or rectum. For chronic cases, the white of eggs in water, or barley or rice water, is superior to boiled milk, which must form but a very small part of the food. Where even this is not tolerated, farinaceous preparations with or without mutton-broth may be used, and acorn coffee may be given once or twice a day. The meals should be small, numerous, and regular.

Constipation usually requires a change of food, but cases occur where a child has a motion perhaps only twice a week, simply because the amount of food taken is insufficient to produce more. Where it is due to excess of casein this must be reduced, and what is allowed mixed with oatmeal water; where due to excess of starch, oatmeal must be substituted. It sometimes depends on deficiency of sugar even in those fed at the breast. A lump of sugar, dissolved in tepid water or in oatmeal water, should then be given before each nursing. In all cases abundance of water is essential. Cod-liver oil is beneficial in many ways, but it must not be mixed with phosphate of calcium.

Rickets is frequently the result of protracted intestinal disorders. The diet should include a considerable proportion of lean meat; or, where this is contra-indicated, barley and oatmeal with boiled milk and salt. The food will contain an ample supply of phosphates, so that none are required as medicines.

Fever consumes carbon, water, salts, and, by elimination of urea, nitrogen; and these losses must be very carefully made good. In ordinary fevers, the food must be liquid and rather cool; in vomiting, cold; in respiratory diseases, warm; and in collapse, hot. The best feeding time is the remission. Sleep should not be disturbed, but when it is due to septic conditions must be interrupted for the administration of nourishment and stimulants.

The rectum will absorb but not digest; food, therefore, must be more or less peptonised before being injected; but, be the food ever so suitable and the rectum ever so tolerant, only one-fourth of the quantity necessary to sustain life will be taken up. An enema is retained in larger quantity by a child if the nozzle of the syringe is lengthened, as *e.g.* by an elastic catheter. The paper is to be continued in the next number of the *Archives*.

RALPH W. LEFTWICH, M.D.

Article 192.

KNAGGS ON PERMANENT EMULSIONS AS LOCAL APPLICATIONS IN SKIN DISEASES.*

It has been stated by numerous observers that the inunction of the skin with fixed oils or fats produced a marked increase of the functions of the skin. Further, when oily substances are applied to a diseased surface of the skin they are not adhesive, on account of the repulsion exercised by water and watery secretions over the fat. Adhesive and impervious substances, unlike oils and fats, have a tendency to arrest skin action. By mixing an oil or fat with an adhesive body the one serves to neutralise the extreme effect of the other, so that, provided the ingredients are non-irritating, a perfectly neutral action on the skin functions will be exercised.

By completely emulsifying a fat with water by means of a gum a permanent emulsion is obtained, which exerts a remarkable curative action on inflammatory cutaneous diseases. The preparations used by the writer are made by combining an ointment basis, preferably a mineral fat, with water, a vegetable gum, and a suitable antiseptic. Boric acid is found to answer best for this purpose. It preserves the gum from decomposition, and neither irritates the skin nor interferes with the action of other medicaments when used with it.

Supposing soft paraffine to be selected as the ointment-basis; one ounce of this substance is placed in a mortar, previously warmed, and incorporated with 160 grains (or thereabouts) of gum acacia; about half an ounce of hot water is then added, and the whole is stirred until emulsified. Boric acid in powder is mixed in, and the emulsion is diluted with water until a mixture of the consistence of a thick cream is obtained. This formula will stand as follows :—

Soft paraffine.....	1 ounce.
Powdered gum acacia	160 grs.
Powdered boric acid.....	16 grs.
Water to make about	2 ounces.

Suitable medicaments can be added to the above formula, or to a formula made with other ointment-basis, and made use of according to the disease to be treated, such as subnitrate of bismuth, or oxide of zinc in eczema, sulphur and balsam of sulphur in scabies, salicylic acid in lupus, and so on.

One of the principles contended for in respect to this plan of treatment is that emulsification is the only practical method by which ointments and lotions can be definitely and permanently combined together. This point was first brought out during the experimental use of the alternate applications of ointments and lotions to the affected parts in cases of eczema. Subsequently, by means of a vegetable gum, the two separate applications were combined together to form a single one. The emulsion formula cited above may be described as the direct and permanent amalgamation of an ointment-basis with a lotion. If oxide of zinc, for example, be added as a medicament, the preparation is then found to be composed of a zinc ointment and a boric acid lotion. By emulsification the particles of the fat are brought into combination with the aqueous fluids used in the process, and are so rendered soluble. The ointment, or ointment-basis loses its character when so combined and becomes merged in the lotion, or *vice versâ*.

This basis, on account of its adhesiveness, enables us to dispense with the use of all textile dressings. When applied to the inflamed skin, it sooner or later dries on as a film, when it affords an efficient protection against atmospheric influences and injury, and at once arrests itching and other forms of irritation. At the same time, on account of its complete solubility in water, evaporation from the surface is impeded ; a condition promotive of cutaneous rest, and consequently beneficial in the reduction of inflammatory action.

This treatment is also in great measure an outcome of experiments which have for their object the close imitation, by artificial means, of natural methods of healing as applied to cutaneous diseases. The principle here involved is carried out by employing an artificially prepared vegetable lymph as a substitute for animal plasma itself. It is asserted by the writer that a non-irritating emulsion of resin or oil is the best vegetable substitute for this coagulative exudation of the animal. The blood itself is practically an emulsion in which the hæmoglobin and other ingredients contained in the corpuscles are suspended in a watery serous fluid through the medium of an enveloping layer of fibrin. The component parts of fibrin are in their turn suspended in the albuminous serum. The gum-resin is, so to speak, the ideal type of the plasma, or sap of the vegetable, and the analogue of plasma in the animal. Mineral fats may be regarded as resins mellowed by mineralisation. The formula of a typical permanent emulsion may be contrasted with blood-plasma, when the resemblance is striking.

Plasma—emulsion-basis. Substances insoluble in water:—Fibrinogen, fibrinoplastin, fibrin ; soft paraffine. Substances soluble in water :—Serum-albumin, chlorides, sulphates and other salts, water ; gum-acacia, boric acid, water.

Since the natural healing fluids of the body are apt to become temporarily incapable of properly performing their functions, and since the presence of the atmosphere and innumerable local and other causes are apt to impede the action of these coagulative exudations, it must be our part to assist enfeebled nature by artificially supplementing her healing forces. G. Thin, M.D.

* *Provincial Medical Journal*, Dec. 1, 1887, January, February, and March, 1888. Mr. H. Valentine Knaggs also read a paper on the above subject at the International Medical Congress at Washington.

Article 193.

LOMBROSO ON FACIAL PARALYSIS IN HYSTERIA.

In 1886 the writer, after reviewing the various opinions about facial paralysis, stated that, although many authors asserted that facial paralysis was always absent in hysterical hemiplegia, two of the cases he brought forward showed that this statement was erroneous. In one, facial paralysis was complementary to hemiplegia ; in the other, it accompanied external ophthalmoplegia.

Shortly afterwards a lecture by Professor Charcot appeared in the *Progrès Médical* (January 1887), in which the possibility of hysterical facial paralysis was denied. Several cases were narrated, in which there was apparently facial paralysis, but really contracture of the lip either on the same side as the hemiplegia or on the opposite. The views of the French school were summed up as follows.

There exists in hysterical hemiplegia a deviation of the face analogous to that in hemiplegia due to organic lesion. But this deviation is distinguished from the latter (organic) by the following signs :—

1. There is a state of 'contracture' which is localised almost exclusively in one lip, and is accompanied frequently by well-marked clonic spasms.

2. In blowing, the air does not issue from the side of the mouth that is apparently paralysed, but from the other.

3. The tongue deviates considerably towards the side on which there is 'contracture,' and the deviation is seen on opening the mouth without the tongue being protruded.

4. The contracture persists for a certain time after the paralysis is cured.

Notwithstanding these observations and statements, Dr. Giacomo Lombroso has quite recently had under his care three cases which convince him that, on the contrary, facial paralysis does occur in hysterical hemiplegia (*Lo Sperimentale*, January 1888).

The first case relates to a woman, aged 26, whose mother had suffered from hysteria, and a sister had been affected with some nervous disease. For a year and a half she had been subject to hysterical convulsions after any excitement, and, later on, began to drag the right leg. The right upper extremity was also affected, but to a less degree. Eventually the paralysis increased so much that she could only move about with the aid of two assistants. There was loss of common sensation over the whole of the right half of the body. The special senses were also affected on the same side, except smell, which was lost on the left. The tendon reflexes were exaggerated, and there was ovarian tenderness on both sides. Hyperæsthetic areas were found on the vertex, on the cervical region of the spine, and on the right elbow. The paralysis was flaccid, and unaccompanied by 'contracture.' There was no muscular atrophy. The lower part of the face was paralysed on the right side, and, even during repose, drawn towards the left. There was no trace of 'contracture.' During laughing or speaking the deviation of the face towards the left was much exaggerated. There was no fibrillary spasm, and no deviation of the tongue. On telling the patient to blow, the air escaped on the right or paralysed side. After ten applications of the constant current the facial paralysis was no longer perceptible, and after about twenty the patient was completely cured.

The second case was that of a boy with paralysis of the right arm and leg, and diminished sensibility on the same side. The face was drawn towards the left, and the tongue deviated markedly towards the right. During laughing or speaking the distortion of the face was increased. On whistling, the air escaped from the paralysed side. Shortly afterwards he had a distinct hysterical attack, and in a few days was quite well.

The last case relates to a domestic servant, aged 36. At the age of 22 she began to suffer from hystero-epileptic fits, and a year later had right hemiplegia, with aphasia, both of which got well spontaneously, after a few months. The present attack began with a fit, during which she did not lose consciousness. On coming out of the fit she found the right arm and leg useless, and the arm in a condition of 'contracture.' There was hemianæsthesia on the right, ovarian tenderness on the left, disturbance of the special senses, hyperæsthetic zones, and absence of the pharyngeal reflex.

The lower part of the face was slightly drawn towards the left; the tongue was unaffected. The upper and lower lips on the right are in close contact with the jaw. The labial fold on the right is less deep than on the left. On laughing or speaking the deviation to the left is increased, and the paralysis of the right half of the mouth is evident. When the patient is told to blow, the air issues from the left side, and not from the paralysed side.

The patient rapidly improved, but was lost sight of before the cure was complete.

In the first two cases the facial paralysis coexisted with the hemiplegia, just as in any ordinary case of paralysis from organic disease. In the last the air issued from the non-paralysed side of the mouth, as in the cases described by Brissaud and Marie in their report of Charcot's lecture. The explanation appears to be that the paralysis was accompanied by 'contracture' in the facial muscles as well as in the limbs. The close approximation of the lips to the jaws was noticed, and this probably rendered the exit of air from the mouth more ready on the unparalysed side. In confirmation of this view it was found that in an old case of organic hemiplegia, in which late contraction had supervened, the air on blowing did escape from the unparalysed side, owing to the contraction of the lips.

Therefore Dr. Lombroso concludes—

1. That in hysterical hemiplegia the lower part of the face is sometimes paralysed.

2. That this paralysis does not differ from organic hemiplegia.

3. That, as in the limbs, it may be accompanied by contracture or not; and that in the former case, on blowing, air escapes from the non-paralysed side of the mouth. H. HANDFORD, M.D.

ARTICLE 194.

ERNST ON AN EXPERIMENTAL RESEARCH ON RABIES.*

THE following is the substance of an abstract from the *American Journal of the Medical Sciences*, No. 186, 1887 :—The author placed before himself three problems for solution—viz. (1) Is there a specific virus in the brain and spinal cord of rabbits who have been inoculated with Pasteur's material, and according to his method ? (2) Is the strength of this virus diminished by previous drying of the spinal cord ? (3) Does inoculation with virus thus modified confer immunity against inoculation with unattenuated virus, or the bite of a rabid dog ?

Two rabbits from Pasteur's laboratory formed the basis of the experiments. They had been inoculated with unattenuated virus material. Of these, one died early, before it came into the author's possession; the other died two days after his arrival in Boston. Pasteur's method of transference was employed—*i.e.* a portion of the spinal cord of a dog, dead of rabies, was made into an emulsion with water and bouillon (both sterilised), and then set aside for the coarser particles to subside. The clearer supernatant portion was then used in the inoculation. The answer to the first of the above questions is found in the fact that successive trans-

* 'An Experimental Research on Rabies.' By Harold C. Ernst. Boston. (*Centralb. f. Bakteriol. u. Parasitenkunde*, 1888, No. 7.

ferences of the virus from animal to animal, whether made subdurally or subcutaneously, set up rabies very uniformly and regularly, after an incubation-stage of longer or shorter duration. Although there were variations in this stage, and in the duration of the illness, the average duration in each case corresponds with Pasteur's results. The symptoms were typical of a specific poison, and were mainly paralytic in character, viz., paresis of the hind legs, and dysphagia ; also opisthotonos, which persisted for some time after death. The *post-mortem* examination revealed no alterations beyond slight local disturbance and congestion of the coverings of the brain and cord. No congestion of the viscera was found, and this, the author thinks, is explained by the fact that the animals were not worried to death, as in 'street-rabies.' The same reason accounts for the entire absence of a stage of excitement. The conclusion that the virus is of a specific kind is supported both by the absence of inflammation (and suppuration) from the brain-substance, and by the fact that modifications of the inoculation-material caused alterations in the symptoms produced, and even their entire absence. In ten cases in which broth or water alone, or spinal cord of a healthy dog, were injected, death followed in only two, and in these two cases death was ascribed to coincident liver-disease (!) Control-experiments on guinea-pigs supported the above conclusion. When an injection was made into a limb with the above-described emulsion fluid, and the animal was killed after a varying interval, the autopsy revealed no local changes, whereas various severe local changes followed the injection of other fluids containing pathogenic and non-pathogenic organisms. But inoculation with spinal cord showed that it contained the specific virus.

The second of the above questions (on the attenuation of the virus by drying the spinal cord *more* Pasteur) is answered also in the affirmative. The cords were dried at a uniform temperature of 68° F. in a dry atmosphere, best in sterilised glass vessels with sterilised cotton-wool plugs, which absorb moisture. The instructions must be exactly followed or failure results. Four series of experiments were made on rabbits with regard to the above question. In the first series unattenuated virus was inoculated subcutaneously, and during the next days inoculations of attenuated virus were made, proceeding from the weaker to the stronger. In the second series, the inoculations of attenuated virus preceded those of unattenuated. In the third series unattenuated virus was inserted subdurally, followed during the next days by protective inoculations. In the fourth series the protective inoculations preceded subdural insertion of unattenuated virus. The results of the first series, the most important practically, were that out of ten cases the protective inoculations were successful in nine, whereas of nine rabbits inoculated at the same time with similar (unattenuated) virus, but not afterwards protectively inoculated, eight died. On this point the author remarks that the experiments of Von Frisch (of Vienna) cannot be considered as decisive for or against Pasteur's theory, for the reason that Von Frisch applied unattenuated virus direct to the brain, thus creating conditions which do not practically arise, because the virus so applied acts too quickly to allow the subsequent protective inoculations to display their influence.

Dr. Ernst expressly mentions that he began his experiments in a sceptical mood, and doubted the practicability of Pasteur's inoculation-method, but ended by becoming a devout believer in its efficacy. His conclusions are summed up as follows:—

1. A specific virus exists in the brain and cord of rabbits inoculated in M. Pasteur's laboratory, which virus, inoculated into animals, always sets up the same symptoms which the animal affording the inoculation-material showed.

2. These symptoms are regularly produced after trepanation, not quite so regularly subcutaneously.

3. The power of the virus is diminished by M. Pasteur's method of drying the spinal cords.

4. The symptoms which follow inoculation always appear after an incubation-stage ; this is shorter in subdural than in subcutaneous applications.

5. Subcutaneous inoculations with attenuated virus, if made according to the Pasteur method, protect most unmistakably against inoculations with unattenuated virus.

6. The action of the virus is prevented by exposure to a moderate heat, but not by a great degree of cold.

The above researches were made in Boston, U.S., uninfluenced by M. Pasteur.

[With regard to Dr. Ernst's paper, it may be remarked that it was a strange coincidence for two rabbits to die of liver-disease after inoculations of spinal cord emulsion from healthy dogs. It is more reasonable to suppose that the inoculations caused death. Again, not all the animals who received protective inoculations after inoculations with unattenuated virus remained healthy, and not all the animals who received inoculations with unattenuated virus, without subsequent protective inoculations, died. Lastly, the rabies is described as being of the usual paralytic form (the rabies of the laboratory, as it has been termed), and yet opisthotonos is mentioned as a prominent symptom. Opisthotonos is due to tetanic contraction of the spinal muscles. Whether the disease which Ernst caused in his experiments was or was not a form of tetanus, it will be convenient to follow up this article with a short account of recent researches into the etiology of traumatic tetanus as a specific disease due to inoculation. As to Von Frisch, Dr. Ernst simply repeats what Pasteur has already said on this subject.—*Rep.*]

E. J. Edwardes, M.D.

Article 195.

RECENT RESEARCHES ON TRAUMATIC TETANUS.*

A summary of the four first papers will be found on referring to Nos. 5 and 6, which are more readily accessible.

1. *Carlo and Rattone.*—These observers in 1884, by subcutaneous inoculations of the contents of an

* 1. Carlo e Rattone.—Studio esperimentale sull' eziologia del Tetano. (*Giornale della R. Acad. di Med. di Torino*, 1884, No. 3.)

2. A. Nicolaier.—Ueber infectiösen Tetanus. Aus dem Hygien. Institute der Univ. Göttingen. (*Deutsch. med. Wochensch.*, 1884, No. 52.)

3. Rosenbach.—Zur Aetiologie des Wundstarrkrampfs beim Menschen. (*Verhandlugen der deutschen Gesellschaft für Chir.*, 1886.)

4. Brieger.—Untersuchungen über Ptomäine. (3 Theil, Berlin, 1886.)

5. Brieger.—Zur Kentniss der Aetiologie des Wundstarrkrampfs. Vortrag aus dem Verein für innere Medicin. Sitzung vom 28 Marz 1887. (*Berliner klin. Wochensch.*, 1887, No. 17.)

6. Beumer.—Zur aetiologischen Bedeutung der Tetanus-bacillen. Vortrag, Greifswalder Med. Verein, 2 July, 1887. (*Berliner klin. Wochensch.*, 1887, No. 30-31.)

7. Shakespea re.—Experimental Investigation on the Cause of Tetanus. (*Med. News*, Sept. 17, 1887.)

acne pustule, belonging to a patient who died of traumatic tetanus, into the sheath of the great sciatic nerve in rabbits, succeeded in causing tetanus and death in eleven out of twenty-one inoculated animals. Tetanus was also transferred from rabbit to rabbit by injections of nerve-substances, taken from a more proximal part of the nerve than the part originally injected. Attempts had previously been made in vain to cause tetanus in rabbits and dogs by injections of blood and pus from tetanic patients. The next advance was made by Nicolaier, who identified the bacillus of tetanus.

2. *A. Nicolaier.*—This investigator, working in the laboratory then under Flügge's direction, and making observations in general upon the micro-organisms of the floor of the laboratory, made the discovery that certain kinds of dirt were able to induce when inoculated into mice, rabbits, and guinea-pigs, 'a complex of symptoms only to be looked upon as tetanic' (Brieger). The most violent tetanic spasms of all the muscles of the trunk and limbs preceded death. Small portions of different kinds of dust were inserted beneath the skin under the upper end of the tail, and the symptoms set in, after an incubation-period of between one-and-a-half and two-and-a-half days, at first in the adjacent muscles, but within twenty-four hours extended over the whole body, the animal dying within two days after the first appearance of the symptoms. Although microscopical examination of the viscera yielded a negative result, Nicolaier always found in the pus of the inoculated site great numbers of slender bacilli, somewhat longer but very little thicker than Koch's well-known bacilli of mouse septicæmia, and those he regarded as the specific excitants of tetanus.

The infectious kinds of earth were next heated for an hour at 190° C. before inoculation, which then had no results on twenty animals. N. also partially succeeded in cultivating this bacillus, by making inoculations in solidified blood-serum from the bodies of animals which had died of tetanus, and maintaining the blood-serum at the temperature of the body for a day or two. The cultivations consisted chiefly of the above-mentioned bacilli, contained in the liquid at the bottom of the tube, and inoculations made with them imparted tetanus to animals without failure. This was also the case with successive generations of the bacilli. N. concluded that there are bacilli which cause tetanus in mice, rabbits, and guinea-pigs, but was unable to solve the question of the relation of these bacilli to tetanus in man. Nevertheless, he mentions the possibility of earthy impurities in wounds as a cause of tetanus in man.

3. *Rosenbach* is the next explorer in the field, and 'his investigations established with a high degree of certainty the part which the above-described bacillus plays in producing tetanus in man, though further experiments are necessary to establish its full significance' (Brieger). A patient having died of gangrene of both feet (with trismus and tetanus) from a frost-bite, Rosenbach, an hour after the death of the patient, removed portions of skin from the feet at the line of demarcation where the skin was only externally discoloured, and made inoculations with them into the thighs of two guinea-pigs. Next morning both were tetanic, and they died the same day. Transferences were successfully made to other animals, and the whole course of the experiments led Rosenbach to affirm that 'the tetanus produced by inoculation in animals is identical with traumatic tetanus in man. Nicolaier's bacilli were regarded by Rosenbach also as the specific excitants, but, like Nicolaier, he failed to isolate them in pure cultivations. 'Laborious experiments resulted no further than a double culture, in which besides tetanus-bacilli only one kind of putrefaction-bacilli was present, a very common saprophytic anaerobe, causing putrefaction in blood serum' (Beumer). In the decomposing blood serum the bacilli of tetanus gradually developed, and after a definite interval of time the fluid always caused fatal tetanus, even when injected in small quantities. This last observation was the most important contribution of Rosenbach to our knowledge of the subject, for it led him to conclude that tetanus could not be directly referred to the tetanus-bacillus as its cause, but to *some poison elaborated by those bacilli*, a poison resembling strychnine in its action on the muscles.

4 and 5. *Brieger* has succeeded in isolating several distinct poisonous ptomaïnes, or toxines, by the agency of the bacilli of tetanus. The chief of these appears to be 'tetanin,' a toxin of the formula $C_{13}H_{30}NO_2$, which at first causes tetanic rigidity in animals, and then tonic and clonic convulsions leading to death. Another toxin is called 'tetanoxin.' This has the formula $C_5H_{11}N$, is a volatile primary amine, perhaps a valerylamine, and sets up at first slight fibrillary contractions, gradually increasing to reflex spasms, followed by total paralysis and death. The action of both the above toxines was demonstrated on animals by Brieger before the Verein für innere Medicin, April 4, 1887 (*see Berliner Klin. Wochensch.*, 1887, No. 17, p. 311), and the crystallised salts and double salts of tetanoxin were shown. Two more volatile toxines are produced by the bacilli of tetanus—namely, 'spasmotoxin,' and a substance which belongs apparently to the diamines. Both these toxines cause severe spasms; the latter one, which was only met with once, caused also an increased flow of saliva and tears. In brain-emulsion, the bacilli produced tetanin and tetanoxin; in milk, tetanin and spasmotoxin, but no tetanoxin; the nature of the nutrient basis, therefore, had a determining influence on the kind of toxine produced. H_2S was richly present with these toxins, but H_2S does not cause tetanus. (Having regard to the prevalent idea that tetanus is by no means uncommon amongst stablemen, Brieger also made experiments with horse-dung. Cultures of this gave, besides cadaverin, only methylanin, a toxin causing paralysis. Injections with horse-dung had no results.) The best temperature for the cultivations was found to lie between 36° and 37°·5 C., the higher the temperature the less the toxines, but the more the ammonia evolved. B. surmises that the high temperature in fever may be instrumental in destroying such bacterial products.

6. We now come to Beumer's paper on the 'Etiological Significance of the Tetanus-Bacillus.' Two cases of traumatic tetanus are reported. In the first of these, a man ran a splinter of wood under his finger-nail while playing bowls along a wooden alley. He felt ill and vomited at the time, then removed the splinter entirely as he thought, and felt quite well for some days. But tetanus came on eight days afterwards and he died of it in three days. Though the injured finger showed very little swelling, and was scarcely tender at all, the nail was split up on the second day of the illness (after cucaine-injection) and a remnant of a splinter of

wood about half an inch long was removed. The channel holding this splinter showed no inflammation, but a droplet of pus exuded when the nail was split up. No *post-mortem* examination was made, and, in default of this, the author made inoculations on animals with minute pieces of the wood, and in some cases the dust, of the skittle-alley. Six white mice were inoculated on April 23, three with wood and, three with dust; all six died of tetanus in a few days. Various animals were thus experimented on, and on July 2, the date of the author's address, six white mice were shown which had been inoculated, three of them three days, and the other three two days previously.

The latter three showed commencing tetanus. The inner aspect of one thigh was the part inoculated, and in every case the affection started in the lower extremity corresponding. The limb became stiff, the toes were extended, movement of the leg, though still possible, was difficult. The tail felt very hard, and when raised remained for some time in the raised position, with an incurvation towards the tetanised side. The other hind limb was affected a few hours after the right, and then movement was only possible by means of the fore-limbs. In the three mice inoculated three days previously the tetanus had extended to the trunk and fore-limbs, but the mode of invasion varied. There was kyphotic incurvation of the spine from tetanic contraction of the spinal muscles, and the animals lay on one side hardly able to move, only the rapid superficial respiration betraying the presence of life. Occasionally tetanic contractions of the whole body came on, and the spine was then still more curved. Death generally ensued about the fourth day.

In rabbits the symptoms were much more striking (two tetanic rabbits were exhibited). The limb inoculated was the first to be affected with rigidity, but general tetanus was only certain when the trunk musculature was affected; death then followed in two or three days. The animals shown had opisthotonus and trismus. Various differences in the symptoms depended on the site of infection, and the kind and condition of the animal selected. The author concludes that this inoculation-tetanus of animals is identical with traumatic tetanus in man.

The second case was that of a little boy who was seized with tetanus, fatal on the second day, without assignable cause. But, after death, a small fragment of stone was found embedded in the sole of the foot (the boy had been going barefoot). No organic alterations were found *post mortem*. Six mice were inoculated with small portions of tissue from the small wound in the foot and the adjacent skin; all six mice died of tetanus in a few days. Inoculations were then made with the (sandy) soil, taken from the place where the boy was accustomed to play, and these also caused tetanus, always after a period of incubation of 1½ to 2½ days.

The author concludes that both these cases teach the same thing, viz. the identity of 'inoculation-tetanus' in animals with traumatic tetanus in man. Moreover, these cases furnish an important therapeutical indication, viz. the thorough removal of all earthy impurities from wounds. It is probable that trismus neonatorum is due to infection of the navel-wound with dirty hands.

[*Remarks.*—Thus Carlo and Rattone caused tetanus in animals by inoculations, Nicolaier discovered the tetanus bacillus and presumed a relationship between it and tetanus; Rosenbach declared that tetanus must be due to some poison or poisons elaborated by these bacilli, and Brieger has isolated and described several such toxines. Beumer caused tetanus also, by inoculations of material presumably holding the specific excitant. But no mention is made of control-experiments by Beumer, and we have seen that Nicolaier caused tetanus by inoculating dust from the floor of a laboratory, in which there was no reason *à priori* for suspecting the presence of a specific excitant.—*Rep.*]

7. *Shakespeare.*—The following summary is retranslated from the *Centralbl. für die med. Wiss.*, 1888, No. 2. The author, from experiments conducted on rabbits by subdural and subcutaneous inoculations with spinal cord from a horse and a mule which had died of traumatic tetanus, arrives at the following conclusions:—Traumatic tetanus of the horse and mule is, in many cases at least, and perhaps always, an infectious disease, which may be transferred to other animals, possibly to man. The virus of the disease is contained in the spinal cord of the diseased animals, and its intensity may be increased by successive subdural inoculations in rabbits, and weakened by a raised temperature and dryness. The effect of the virus is far more intense after subdural transference than after subcutaneous or intramuscular application. As to any prophylactic effects of inoculation, the author reserves himself till the completion of his experiments.

E. J. Edwardes, M.D.

Article 196.

STILLING ON THE PATHOGENESIS OF GLAUCOMA.

This paper (*Archives of Ophthalmology*, December 1887) forms an important contribution to the pathology of glaucoma, but we should advise any one interested in the subject to read the original paper in the German edition of the *Archives*, as the American version, having been abridged from 37 to 7 pages, gives a very inadequate idea of its contents.

Recently, in reviewing Leplat's experiments on the 'Nutrition of the Vitreous' (London Medical Record, 1887, p. 556), which showed that the optic nerve was the chief channel of exit, we pointed out that if this view was accepted the theory generally held of the pathology of glaucoma would undergo considerable modification.

Professor J. Stilling, in this paper, takes the same view as to the mode in which fluid is removed from the vitreous, and applies it to the pathology of glaucoma.

The channels of exit for the aqueous are well ascertained, but little is really known about the exit of fluid from the vitreous. Either it must pass in some way into the aqueous, or there must be other channels for its escape. The former view has been generally held, but is believed by the writer to be untenable. Attempts have been made to solve the question by injecting fluorescine subcutaneously, or into the vitreous. The results were thought to procure the forward passage of the fluid, but it must be borne in mind that the distribution of a highly diffusible substance like fluorescine may depend on entirely physical causes, and be quite independent of the normal lymph currents; and it does in fact take place in the enucleated eye in the same direction and with the same rapidity as in the

living organ. If non-diffusible substances, such as alcannin-turpentine or Berlin blue-cinnabar, be injected into the eye from the optic nerve, it may be rendered as hard as a stone without any of the substance entering the aqueous chamber. It is found, on the contrary, in the following spaces :—1. The central canal of the vitreous reaching right up to the lens, but none passing round the latter into the aqueous as described by Michel, and the author considers that when this occurs it is due to a rupture having been produced. 2. In the space between the central and peripheral parts of the vitreous. 3. Between the pigment layer and the rest of the retina.

The central canal has all the characters of a lymph space ; it is lined by a hyaline membrane, and can be injected from the optic nerve and its sheath, and is also in connection with the concentric spaces between the lamellæ of the peripheral portions of the vitreous.

The author believes that in the normal condition no fluid whatever passes from the vitreous into the aqueous, but that it escapes by the central canal, and by filtration through the zone of sclerotic immediately around the nerve. The following experiments demonstrate this filtration. The posterior segment of a normal human eye, freshly enucleated, is placed in alcohol in order to remove superfluous water, and, by means of a well-closed glass tube, is subjected to the pressure of a twelve-inch column of oil, which is said to be only equivalent to one-seventh of the normal intra-ocular pressure. After a few minutes fluid exudes through the optic nerve, and its sheath, and the zone of sclerotic around the nerve. The greater part escapes by the inter-vaginal space, and on the nerve and its sheath real drops form. If its exit through the nerve be prevented, drops also form on the sclerotic. A very large number of experiments were made on eyes at all periods of life, and the results showed (although there were some exceptions) that the zone of filtration becomes smaller, and the amount of fluid exuding becomes less as age advances, until at 70 the fluid barely filters through the nerve and its sheath.

Examination of glaucomatous eyes showed that filtration was impaired in excess of the age. It is of course difficult to obtain a sufficient number of glaucomatous eyes which have been recently enucleated, and some of those examined had been long in Müller's fluid. This, however, in no way vitiated the results, since Müller's fluid increases the permeability of the tissues.

To ascertain whether the optic nerve and its sheaths formed a channel of exit in the living eye, the nerve was ligatured in a living animal, and the experiment was always followed by a temporary rise of intra-ocular pressure. Simple division on the other hand without ligation caused lowering of tension. It is essential in these experiments that the ciliary nerves should not be included.

The combined experiments of ligation of the nerve and subcutaneous injection of fluorescine gave important results. When fluorescine is injected, either directly into the eye or subcutaneously, the papilla and optic nerve become only very slightly tinged. If, however, one optic nerve be ligatured close to the sclerotic, then the substance of the papilla becomes coloured to the same extent as the other tissues. The author explains this by assuming that the current through the nerve in the normal condition prevents a continuous diffusion of the substance into the tissues.

Stilling finds it difficult to reconcile the accepted theory of obstruction to the anterior outlets with the diminished depth of the anterior chamber, which is a common symptom in glaucoma. On the other hand, Brailey long ago showed that sclerosis of the optic nerve was a constant and very early change in glaucomatous eyes. Stilling has found another pathological change, which does not appear to have been previously described, namely a separation of the dural sheath and adjacent sclera into their component lamellæ. This was most marked in glaucoma absolutum. The same change was found in a senile eye which had presented no symptoms of glaucoma, but in which the filtration was like that of a glaucomatous eye, and in two young eyes in which also filtration was bad. [We do not see that it is so stated, but presume that the writer looks upon these changes—which would obviously favour filtration—as indications of an ineffectual attempt at compensation for the impaired scleral filtration.—*Tr.*]

The effect of mydriatics in setting up glaucoma, in an eye predisposed to the disease, is discussed. On the theory of obstruction at the angle of the anterior chamber, the deleterious effect of dilatation of the pupil was easily explicable. Stilling believes that the effect on the pupil is not the essential point, and he argues that, were it so, darkness would be injurious in glaucoma, which is not the case. He believes that these substances act by irritating the secretory nerves. The following are the chief conclusions which Stilling draws :—

1. That there is no open communication between the vitreous and aqueous chambers. 2. That diffusible substances may under pathological conditions penetrate the aqueous from the vitreous by means of the space between the retina and choroid. 3. That the escape of lymph from the vitreous takes place by the optic nerve and its sheaths, and the adjacent zone of sclerotic. 4. That the power of filtration decreases with age, and still more in glaucomatous eyes. 5. That glaucoma is due to an increased intra-ocular pressure, for the relief of which, owing to the sclerosed condition of the eye, no compensating increase of filtration can take place. Variations in intra-ocular pressure are frequent in health, it being lower during sleep ; chloral has the property of lowering intra-ocular tension in animals, a fact that might prove to be of therapeutic value.

Glaucoma, occurring as the result of total posterior synechia, is equally explicable on this theory as by supposing that the passage forward of fluid from the vitreous is blocked, for the aqueous, being unable to pass forwards through the pupil, an abnormal backward current is set up. This may be compensated for by increased filtration ; but if this does not occur soon enough, or is insufficient, glaucoma will result. The writer thinks that the fact that in every eye with secondary glaucoma which he examined he found the changes already described in the optic nerve-sheath supports this view.

Iridectomy acts, not by remedying the defect, but by making a fresh channel of exit through the scar. [It seems to us that the explanation of the action of mydriatics, myotics, and iridectomy constitutes a weak point of this paper.—*Tr.*]

W. ADAMS FROST.

Article 197.

BABES ON HYDROPHOBIA.*

In concluding this paper the author sums up, giving the chief differences between his views and those of Pasteur.

1. So far as modern methods go, no constant micro-organism is found characterising hydrophobia. The various abnormal structures found in the tissues by Pasteur, Roux, Gibier, Fol, Rivolta, and others are in some cases not micro-organisms, in others not peculiar to the disease. The micro-organisms found by the author and others do not produce hydrophobia. His observations have made it probable that something at present unrecognisable, exceptionally existent in the nervous system, produces hydrophobia. Further observations have shown that the poison acts in general like bacteria, but possesses the power of greater resistance, for instance to carbolic acid, than most known bacteria. Histological observations show nothing characteristic.

2. With regard to symptoms, the condition of the temperature appears important, and in particular the author has observed a premonitory fever generally with slight loss of strength, nervous symptoms either being present or following immediately afterwards. After the disappearance of this fever the animal may be completely healthy for weeks, until at last the hydrophobia breaks out. Though Pasteur mentions that the disease may appear and again disappear, he does not recognise this premonitory fever, which is much commoner than pronounced nervous symptoms. It appears that it may also occur in man long before the disease itself breaks out, and if so it is of great diagnostic interest. This must not be confused with the wound fever, which occurs one to three days after inoculation. The peculiar course of the disease after intra-ocular inoculation is mentioned. The author finds that, as a rule, the great nerve-stems in the neighbourhood of the central nervous system are virulent, whilst Pasteur says that the whole nervous system is poisonous.

3. It is interesting to observe that the fixed virus can be strengthened by artificial selection and cultivation, and by opposite selection can be weakened. It is of practical value to note the fact that the virus can be rapidly strengthened by several generations through the brains of guinea-pigs, as well as that these animals are more susceptible to it than dogs. The regular appearance of fever at the end of the fourth or beginning of the fifth day after inoculation with the virus is the best criterion. The virus killed dogs of 800 to 1,000 gr. regularly in from seven and a half to eight days after inoculation, whilst Pasteur's died on the tenth day.

4. It is much more difficult to protect dogs against intracranial inoculation than Pasteur asserts. Dogs inoculated with a Pravaz-syringe often do not become hydrophobic. The bite of an affected dog or scarification produces more frequently, but by no means always, hydrophobia. It is therefore difficult to say whether an early or late inoculation protects against hydrophobia. When the anterior part of the head of a dog was opened and allowed to be bitten, the most positive and valuable results were obtained. The author's few favourable results were caused probably by the fact that in spite of every care, by the drying of the virulent spinal cord, no regular gradually increasing series of protective material could be produced. Pasteur also experienced irregular action of the same material, though to a smaller extent than the author. This is probably due to the fact that the latter used the cords of smaller animals, which are less regularly altered by drying than those of the larger. This was evidently the reason why the inoculation of cords dried for different periods succeeded better than Pasteur's method. The use of mixed cords dried for different periods has, in the author's experience, shown itself a better protective than the simple preparation.

In hydrophobia we have to do with several stages, one of which is the spreading of the poison in the organism (premonitory fever), and especially in the central nervous system, on which follows a dispersion of the virus, and a certain systematic increase of the same from certain points of dispersion, which causes at some period the outbreak of the hydrophobia. The dispersion is very extensive, but only a few points are necessary. These points must be places connected intimately with the nervous elements, for, as a fact, the poison is almost solely met with in the nervous system. That in hydrophobia we have not to do with a simple increase of the poison in the blood or lymph vessels of the brain, but with a gradual systematic dispersion, is made more probable by the fact that the outbreak is indifferently caused by the inoculation of much or (to a certain point) little virus between the cerebral membranes, or even in the brain. In either case, five days pass until the fever appears, and six and a half before the appearance of nervous symptoms.

Bertram C. A. Windle, M.D.

* 'Studien über die Wuthkrankheit.' Von Professor Dr. Victor Babes. (Virchow's *Archiv*, Band cx., Heft 3, p. 562.)

Article 198.

BALLANCE AND EDMUNDS ON REMOVAL OF THE BLADDER IN CERTAIN CASES.*

The probable necessity of removing the bladder in a case recently brought before the Clinical Society by Mr. Pitts has led the authors to work out a practical method of performing the operation. They do not seem to have been aware at the time of the observations of Glück, Fisscher, and Snamenski, experiments which were noticed by Pousson in his work on surgical interference in tumours of the bladder (*see* London Medical Record, 1885, p. 173, and *Brit. Med. Jour.*, April 25, 1885). And the authors go beyond M. Pousson, for he rejects all idea of the radical extirpation of a tumour involving the trigone and posterior wall of the bladder, whereas Messrs. Edmunds and Ballance search for the best means of entirely removing the bladder when occupied by a cancerous growth even in these parts. Partial removal of the viscus, especially in its anterior wall, has been effected safely in dogs, but the lower and posterior parts are much more difficult to deal with, and the diversion of the ureters has always proved a difficult matter. Operations are, however, now performed successfully which at one time were thought impossible, and we do not see that the authors' suggestions are unreasonable. A radical removal of the diseased organ, they urge, should be undertaken in suitable cases rather than

* Ballance and Edmunds on removal of the bladder in certain cases and on the best method of diverting the ureters and removing the bladder.—('St. Thomas's Hospital Reports,' vol. xvi.)

a scraping, nibbling, or incomplete operation, which is certain to be followed by a rapid recurrence of the growth. Mr. Pitts has already expressed his intention of carrying out the measures recommended in this paper if the case of recurrent bladder tumour shown at the Clinical Society gives him the opportunity, and the event will be watched with interest.* The bladder, it is maintained, is an organ of convenience rather than a necessity to life, and it would be better to go without a bladder at all than with one harbouring a cancerous graft. And by the plan recommended by the authors there would be two urinary sinuses discharging externally, but this would be no great hardship, and if the diseased viscus were removed it is reasonable to hope that there would be a temporary or perhaps permanent arrest of the growth, as has happened in cancer of the rectum when the fæces are entirely diverted by complete division of the colon. In malignant disease of the bladder, too, lymphatic gland infection seems to occur only in the late stage, and this is an argument in favour of the operation.

The first step is to divide and bring out the ureters, and these had better be treated on two separate occasions, so that two preliminary operations would be necessary before any interference with the bladder is attempted. The ureters can be reached by an incision through the front of the abdomen, somewhat similar to that for ligaturing the common iliac artery, and good diagrams are given in this paper for the lines to be followed. The incision is curved with the convexity outwards; it commences below, vertically above the spine of the pubes, at the level of the junction of the middle and lower thirds of a line connecting the umbilicus and pubes. From this point it extends outwards and upwards to within an inch-and-a-half of the anterior superior spine, then upwards and inwards towards the umbilicus until a point is reached vertically above the commencement of the incision. The skin and tissues are divided down to the peritoneum, but the rectus and its sheath are left uninjured. The peritoneum is deflected from the iliac fossa, and the ureter is found adhering to it in the region of the common iliac artery. The ureter is followed down towards the bladder, and ligatured about half an inch to an inch from the spot where it enters the bladder. The ligature is applied in two places, and the ureter divided between them. The lower end of the upper portion has then to be brought out to the surface of the body, and the plan here recommended differs from previous plans in that the ureter is passed through a special opening made by a separate incision over and about half an inch behind the middle of the crest of the ilium. This opening should be only just large enough to transmit the ureter, which is secured by fine silk sutures, half an inch or more of the tube being made to project beyond the surface of the skin. Care must be taken that the ureter is freed from its attachments, so as not to be bent at too sharp an angle, and the lower portion in connection with the bladder has to be carefully asepticised.

The two ureters having been thus diverted by two operations, the bladder can be excised by a suprapubic operation. A vertical incision having been made from the symphysis, about half-way up to the umbilicus, the peritoneum has to be reflected off the bladder. This is easily done, as far as the entrance of the ureters, by means of the finger and a pair of curved blunt-pointed scissors. The anterior, lateral, and posterior walls of the bladder are now free from all attachments, and can be easily removed. In the region of the trigone only the mucous membrane should be removed, in consequence of the vascular and other important relations of the base of the bladder. Fortunately, carcinoma is at first limited to the mucous membrane, and this can be peeled off at the base of the bladder from the muscular coat. It is curious that in their experiments on the dead body the authors found in one case that after easily removing the bladder by the above method, 'on turning it aside through the small hole which constituted the junction of bladder and urethra, a quantity of blood was discovered, and a new growth (of which the man had evidently died) was seen attached to one of the lateral walls of the viscus.'

Stricture of one or both orifices of the ureters would not be likely to occur, as they extend to the surface of the skin. The authors conclude with drawing attention to two points:—In the first place, they emphasise the beneficial results they think would follow the complete diversion of the urine from the badder, and point out that with this even partial operation measures such as scraping, the application of caustics, &c., would probably be attended with more lasting benefit; in the next place, they urge that the subject of double urinary fistulæ, and their possible effect upon the kidneys, ought to be thoroughly studied upon animals before recourse is had to the above procedures for the alleviation of the miseries of patients afflicted with cancer of the bladder. We hope to hear more on this subject before very long.

W. W. WAGSTAFFE.

* We have just heard that this patient is dead with further visceral complications.

ARTICLE 199.

THOMPSON, PITTS, AND OTHERS ON OPERATION FOR THE REMOVAL OF GROWTHS FROM THE BLADDER.

THE high operation of cystotomy by suprapubic incision has now taken a definite place in the operations of modern surgery since Garson has shown the value of rectal distension in raising the bladder, and the advocacy of Sir Henry Thompson has no doubt brought the proceeding into public favour. It is especially on the diagnosis and removal of growths in the bladder that the following remarks bear, and the further experience of the leader in vesical surgery must be noticed with care, the more especially as he was originally the supporter of the rival operation of perineal incision.

Two important contributions to the subject have recently been made at the Clinical Society, and are reported in the last number of their transactions. One is by Sir Henry Thompson, and the other by Mr. Pitts, of St. Thomas's Hospital. Sir Henry narrates six cases of tumour of the bladder recently removed, in three of which the suprapubic operation was employed, in two the perineal incision only, and in one, a female, urethral dilatation was sufficient for the purpose. In one of the suprapubic operations, perineal incision was first made for the purpose of exploration. In two of the cases he considers there was complete and permanent cure, two others were of too recent date to enable him to speak with certainty as to their future, and in the remaining two comfort was given and the fatal

issue postponed. That he may be too sanguine of the complete and permanent cure seems possible from Mr. Pitts' case, for the period of observation in the above extends to only one year, and in Mr. Pitts' case there was no sign of recurrence for a year and a half.

Sir Henry Thompson's general remarks are valuable. Remembering that a bleeding growth in the bladder is invariably fatal sooner or later, and that neither nature nor medicine has been known to cure it we may hail any success whatever obtained by operating as a clear gain to the patient. There is a moderate proportion, he thinks, permanently cured, but there is no question that life is often prolonged. He can record thirty-three cases in which the growth has been removed by one or other operation, and two of these cases have been operated on twice. In the great majority of these cases the fatal event was postponed, and in a few for a considerable time. In some there had been two or three years of active useful life since the growth was removed, and previous to the operation they had been unable for some time to do anything.

Some valuable practical remarks are added as the result of his experience up to the present time. He would never operate with a view to removal when a mass of irregular hard deposit is felt in the situation of the prostate and bladder by rectal examination, although for the purpose of removing the urine direct through a perineal opening the proceeding may be desirable to relieve extremely difficult or painful micturition. This physical condition being absent, he would prefer, in most cases of suspected vesical tumour, to open the membranous urethra by a small incision, so as to admit the finger to explore the interior of the bladder. If a polypoid growth is present, which the operator feels he can separate at its neck without much difficulty by the forceps, this operation will be sufficient. But if there is a large mass of growth, soft or firm, springing from a broad base or from separate parts of the bladder, the most efficient procedure will almost certainly be suprapubic cystotomy. There is another advantage gained by this method, viz., if the patient has already lost much blood, he may subsequently be liable to bleed less by this operation than by the perineal one, because hæmorrhage is more easily controlled. With only a perineal opening there are no means of controlling subsequent hæmorrhage. Secondly, and this has regard to the subject of diagnosis, it is worthy of remark that, where the history of a suspected case of vesical tumour extends over three or four years or more, and the earliest symptom was bleeding, painful micturition being considerable. The case is almost certainly papilloma except in the result of obstruction by clots. On the other hand, when painful and frequent micturition have been the earliest and most manifest symptoms, and bleeding has appeared at a later stage, the disease is likely to be more or less malignant in its nature, and to be either epithelioma, sarcoma, or carcinoma.

These opinions from a surgeon of such large experience and sound judgment are especially worthy of attention at the present time, and among the recent contributions to the subject, perhaps the most important is by Mr. Pitts, which appears also in the *Transactions of the Clinical Society*. There are features of pathological as well as clinical interest in the case here reported. The man was operated on two years before by means of the perineal operation, and the growth was apparently single and pedunculated, and was removed by the écraseur close to the origin of the pedicle. He was shown before the Society, and the case fully reported, and a reasonable hope expressed that the cure would be permanent. However, about a year and a half after operation came an occasional trace of blood in the water, and this increased, so that Mr. Pitts opened the bladder above the pubes just two years after the perineal operation. He found now at the site of the old pedicle—viz., just below the right ureter, there was widely diffused recurrence; the growth for the most part but slightly elevated, but some of the conelike projections being as large as the top of one's finger. These were scraped away by a sharp spoon, but the bleeding was very profuse. It is worthy of notice that the operator found it more convenient to withdraw the rectal bag and trust to the finger of an assistant in the rectum to bring the deeper parts of the bladder into view. The patient made a good recovery. In three weeks the water passed by the urethra, and in a month from the time of operation the wound had healed, the urine was free from blood, and he had lost all pain on passing it. In a note subsequently added to the paper, nine months after the second operation, he says, 'there can be little doubt of the malignant nature of the case, which, on examination three years ago, was ascertained to be a simple pedunculated tumour.' This opinion is formed partly upon the further recurrence of hæmorrhage and pain, and partly upon the microscopical characters of the growth, but these latter were not very definite, the cellular elements were more oval and numerous, and therefore consistent with the greater malignancy often found in secondary growths.

The change in type of what appeared originally a simple pedunculated growth adds to the importance of this case pathologically, and we have yet much to learn of the chances of complete recovery after the occurrence of new growths in the bladder, though there is no reason to anticipate any difference from growths elsewhere. The advantage of the suprapubic over the perineal method, or combined with it for the removal of bladder-growths, seems also to be indicated by this case, and other cases recently reported confirm these views. Sir Henry Thompson himself inclines to a combination of the two operations, and Mr. Southam * has given a case in which appears the advantage of a perineal incision for exploration and drainage, and a suprapubic one to facilitate the removal of the growths. It is worthy of notice that, though the urethra was opened first, there was no difficulty in keeping the bladder distended. Mr. Buckston Browne also reports † a successful case of fibro-papilloma of the bladder operated on by the double method. Mr. Reginald Harrison is, to some extent, in favour of the same treatment, though at first he was inclined to be satisfied with the perineal incision for the removal of vesical growths.‡ However, his opinion is that the less intravesical malignant growths are interfered with the better. But the diagnosis of malignant and non-malignant growths is not made clearer by him, and there is no doubt great relief is given to distressing symptoms by one or other operation.

W. W. Wagstaffe.

* *Brit. Med. Jour.*, Oct. 18, 1886.
† *Brit. Med. Jour.*, Jan. 29, 1887.
‡ *Surgical Diseases of the Urinary Organs*, 1887, and *Lettsomian Lectures before the Medical Society*, 1888.

ARTICLE 200.

WYSS ON THE TREATMENT OF CHRONIC BRONCHITIS OF THE AGED.

DR. WYSS, of Geneva, writes in *Der Fortschritt*, No. 2, Jan. 20, 1888, as follows :—Of the many remedies employed in this complaint, the following deserve special notice :—

1. Naphthaline, $C_{10}H_8$, is the product of distillation of coal-tar, of which it possesses the disagreeable odour. It possesses some of the physiological properties of camphor, and acts as an energetic expectorant and stimulant. It is best prescribed in the form of medicated pastilles, each containing 0·10–0·50 of a gramme (1½ grain to 8 grains), to be taken three times daily, or as inhalation, being very easily volatilised by the action of steam.

It should be very carefully used on account of its irritant effects on the renal tissue, and the peculiar modifications in the nutrition of the eye from its continued use, which have been described by oculists (Dox, Panas, Magnus) under the name of naphthalinic cataract and retinitis.

Magnus, moreover, observed in animals which he had submitted to the prolonged action of naphthaline constant emaciation and even arrest of development.

2. Terpine, $C_{10}H_{16}$, $2H_2O$ + aq. Its use as an expectorant has been strongly advocated by Dr. Lépine, of Lyons. It is given in doses of 0·20–1·0 gramme (3 to 16 grains), and more.

Occasionally symptoms of gastro-intestinal irritation after its longer employment have been noticed. This remedy ought to be taken during or immediately after meals, in form of pills. ℞, terpin. hydrat., 3·0 (two scruples and a half) ; sacch. alb., mucilag. gummi accac., āā, q.s. ut f. pill. No. 30. S. Three pills daily.

3. Terpinol, $C_{20}H_{16}O$, represents an oleaginous, colourless liquid of a faint hyacinth scent. It is a perfectly harmless substance, which is principally eliminated by the lungs, liquefying the bronchial secretions. It may be prescribed either in pills or in gelatinous capsules containing 0·10 of a gramme (1½ grain), in daily doses of 0·5 to 1·0 (8 to 16 grains).

4. Lippia Mexicana (a Verbenacea), the concentrated tincture of which is recommended by Dr. France, who considers it one of the most efficient expectorant and soothing medicines. In all kinds of bronchial irritation, complicated with violent attacks of cough, the tincture of Lippia mexicana has always been of uniform action and produced rapid relief.

5. Menthol, $C_{10}H_{20}O$, the camphor of mint, has proved an excellent expectorant. It is generally prescribed in the form of inhalations, which not only facilitate and rapidly diminish the expectoration, but also allay the violent attacks of cough, which so much exhaust the strength of the patients.

For the administration of these inhalations Dr. Wyss has devised an apparatus (made by Mr. Penfold at Genoa, price 5 francs—*i.e.* 4*s.*) resembling the Turkish narghilé. Its use is very easy, and does not fatigue the patient. It conveys the aqueous vapour charged with the medicament, and sufficiently cooled by a current of air which passes through the apparatus, to the mucous lining of the bronchi, instead of barely passing the larynx, as is the case with other kinds of inhalers. The beneficial effects of these inhalations is most striking.

FERD. ADALB. JUNKER, M.D.

ARTICLE 201.

MALGAT, DIEULAFOY, AND DUJARDIN-BEAUMETZ ON CARBOLIC ACID IN THE TREATMENT OF TUBERCULOSIS.

DR. MALGAT, of Nice, writes (*La Médecine des Ferments*, No. 33, 1888) that the numerous successes he has had with carbolic acid in the treatment of pulmonary, laryngeal, and even fistulous tuberculosis have fully convinced him of its efficacy in such cases. The two following cases are of special interest. In the first case the patient, an ex-commandant, 48 years old, complained of gastric pains and weakness in August 1885. Examination demonstrated that there was no serious lesion in any of the organs. The patient acquired the habit of inhaling ether to soothe the pains. In August 1886 he had a serious affection of the stomach, from which he partially recovered. In October he began to grow thin ; the appetite diminished ; evening fever, nocturnal sweats, and a constant dry cough appeared. In November unmistakable symptoms of tuberculosis were observed. There were crackling sounds in the apices of the lungs ; streaks of blood were detected in the sputa. The patient continued to inhale ether to soothe the coughing. In December the patient had measles followed by a severe attack of bronchitis. His condition appeared desperate, when, at the end of December, Dr. Dechat's antiseptic treatment was tried. Dr. Dechat, who was the first to administer carbolic acid internally, prescribed the following treatment :—A spoonful of sulpho-carbolic syrup, three times a day, and three times a week an injection with iodo-carbolic solution. This treatment was continued during one month ; considerable improvement ensued ; the treatment was modified. The patient continued to take ether. He has increased in weight, recovered his appetite, and is almost free from cough. Blood was no longer detected in the sputa ; nocturnal sweats disappeared. Respiration was normal ; the cracklings in the apex of the lungs disappeared in February 1887. The patient is apparently cured.

The second case was one of laryngeal granulations of tuberculous nature. The patient was pale and thin, and presented every external sign of tuberculosis. He had typhoid fever at 33. At 42 he had an attack of bronchitis ; his voice failed ; he coughed constantly. The appetite diminished ; he grew thin ; there was purulent expectoration. The back of the throat was red. A number of little yellow spots (granulations) were detected on the soft palate, the pharyngeal mucous and the vocal cords. There were mucous *râles* throughout the two lungs ; in the apex of the right lung humid crepitating *râles* were detected. Percussion in the right apex gave a dull sound. On Feb. 26 the following treatment was adopted :—Three tablespoonsful of sulpho-carbolic syrup were administered daily ; two injections with iodo-carbolic solution were made every week. The patient gradually gained strength, the cough and nocturnal sweats disappeared ; the appetite returned. On April 4 the patient had gained 4 lbs. in weight. On April 24 the mucous *râles* had disappeared, the condition of the throat had improved, the voice was clear, and the patient had gained 6 lbs.

An anti-parasitic treatment with carbolic acid

is now universally employed in the Paris hospitals. M. Dieulafoy and M. Dujardin-Beaumetz have employed carbolic acid in subcutaneous injections. The former administered injections of 1 gr. at 1 per cent. with the Pravaz syringe, and succeeded in checking intermittent fever which had recurred four times in one year, and which strong doses of quinine had failed in modifying. The reason M. Dieulafoy employed such small doses of carbolic acid was because he feared the occurrence of untoward symptoms. But it has been clearly proved that it is only when carbolic acid is not pure that such accidents are observed. M. Dujardin-Beaumetz has employed 1·0 gr. of a 2 per cent. solution, but he insists on the necessity of using pure carbolic acid. Indeed 15 and 20 grs. of such a solution may be prescribed when the acid is pure.

M. Dujardin-Beaumetz, in a lecture on carbolic acid in the treatment of phthisis, said the absorption of the acid by the pulmonary passages being out of the question, the only means of administering it is by hypodermic injections and through the digestive tube, whether by the stomach or the rectum. The digestive tube is defective in consumptive patients; any irritation of the stomach in their case should be avoided. The skin and the rectum are therefore the only means by which the acid may be safely introduced. The valuable antiseptic properties of carbolic acid, its volatile properties and its elimination by the respiratory organs, have induced many medical men to employ this substance in pulmonary tuberculosis. The injections may be made on the skin, or deep injections may be made by inserting the needle of the syringe perpendicularly into the soft parts; by this means the antiseptic liquid may be conveyed to the very spot in which the lesion exists. Professor Lépine and his pupil Truc tried intra-pulmonary injections in tuberculosis, with a 2 per cent. solution of creosote in alcohol. An injection with a weak solution of morphine to prevent pain was previously made. These writers recommended iodoform, by which excellent results were obtained in the treatment of tuberculous abscess. For the carbolic acid injections, a large syringe, containing 5 grs. of the liquid, should be employed. A 2 per cent. solution of carbolic acid, *perfectly pure*, and previously dissolved in glycerine (alcohol is irritating) should be used. The spots at which the injections are practised should be chosen in the anterior portion of the chest, below the clavicle. The number of incisions to be made must be determined by the particular character of the affection, but an excessive number may determine the symptoms of intoxication which have been observed after a treatment with large doses of carbolic acid, namely cold, cyanosis, collapse, vomiting, blackish colouring of the urine. These phenomena are dependent on certain idiosyncrasies of different individuals. Certain patients cannot be submitted to this treatment In a large number of patients, however, the following results are obtained with carbolic acid:—The appetite returns; the patients can leave their beds and walk out; the coughing and expectoration are modified; the nocturnal sweats frequently disappear. On the whole, although there are certain disadvantages attending the use of carbolic acid, such as the possibility of intoxication, and a certain amount of irritation, M. Dujardin-Beaumetz considers that this substance will procure relief in many cases of pulmonary tuberculosis.

W. Vignal.

SURGERY.

RECENT PAPERS.

202. Wagner, Dr. V.—On Massage Treatment of Transverse Patellar Fractures. (*Deutsch. med. Zeitung*, No. 11, 1888.)

203. Greiffenhagen and Von Wahl.—On Fractures of the Cranium. (*St. Petersburg med. Wochensch.*, No. 4, 1888.)

204. Langenbuch, Dr.—Resection of a Left-sided Hepatic Lobe. (*Deutsche med. Zeitung*, No. 13, 1888.)

205. Veliaminoff, Dr. Nikolai A.—Exploratory Laparotomy in Tubercular Peritonitis (*Vratch*, No. 41, 1887, p. 796.)

206. Veliaminoff, Dr. Nikolai A.—Compound Fracture of the Skull; Formidable Lesions; Death seventy-two hours after the Injury. (*Vratch*, No. 41, 1887, p. 796.)

207. Veliaminoff, Dr. Nikolai A.—A Case of Compound Fracture of the Skull, Secondary Hernia Cerebri; Recovery. (*Vratch*, No. 41, 1887, p. 796; and No. 52, p. 1011.)

208. Curtis.—On Contusion of the Abdomen with Rupture of the Intestine. (*American Journal of Med. Sciences*, October 1887, p. 321.)

209. Fox.—On Two Cases of Abdominal Section for Traumatism. (*Med. Chronicle*, February 1888, p. 394.)

Art. 202. *Wagner on Massage Treatment of Transverse Patellar Fractures.*—The following is a notice in the *Deutsch. med. Zeitung* of a paper by Dr V. Wagner, regimental surgeon in the Austrian army. To effect osseous union of transverse patellar fractures, two different methods by suture are given, the one with and the other without opening the knee-joint. But the necessarily prolonged inactivity of the limb causes atrophy of the quadriceps and stiffness of the knee-joint. Now experience teaches that, as far as regards the perfect usefulness of the limb, it is a matter of indifference whether there is a healing of the patella itself or only of the short ligaments, as long as such atrophy and stiffness can be prevented. This latter point was gained by Wagner most successfully in five cases by adopting Metzger's plan. Without paying any attention to the ununited fragments, massage of the joint and extravasated blood was done early, and followed soon by active or passive movements, without using any bandage. The course pursued is thus described:—The patient is laid on a bed with the leg stretched on a simple inclined plane or an adjustable wooden splint in such a way that the heel is lifted up. For the first two or three days an ice-bag is laid on the suffused, swollen, and painful knee. On the fourth or fifth day massage can be already begun not only on the entire extent of the quadriceps but also on a great portion of the joint. Soon passive movements are made, and, as soon as it can be done without any great pain, the patient himself begins to move the joint, and can in about a fortnight or twenty days attempt to walk about with crutches. Should the fragments be too much separated, Wagner recommends Ceri's subcutaneous suture. But even in such a case, he asserts, you cannot begin too soon with massage and gymnastics.

203. *Greiffenhagen and Von Wahl on Fractures of the Cranium.*—The following review of Greiffenhagen's work on the Mechanism of Cranial Fractures (Dorpat, 78 pp., 5 plates), and Professor E. von Wahl's paper in the *Centralbl. für Chirurg.*, is given in the *St. Petersburg med. Wochensch.* If the human skull be regarded as an elastic hollow

sphere, we may distinguish the poles (one of which would correspond with the impinging point of the fracturing force), the equator, and the meridian and parallel circles. In order to break the continuity of the spherical wall, it is necessary that a more or less heavy body should come into contact with it with sufficient force. According as the fracture is caused by mere weight or by force, it is ascribed to pressure or collision. Now, if the skull is exposed to a constant pressure in the direction of the axis connecting the two poles, it is clear that the axis will be shortened, while, the two hemispheres on either side of the equator being flattened at the poles, the equator itself and the parallel circles, with their diameters that are at right angles with the area of pressure, will be lengthened. This must necessarily entail a separation of the substance particles of which the parallel circles are composed; and if, therefore, the amount of pressure exceeds the elastic resistance of the skull, the continuity of the cranial wall will be broken and a fracture ensue. Now, since the interior surface of the wall, as being a smaller circle, is exposed to relatively greater tension, the fracture always shows itself first, and in greatest extent in the tabula vitrea; and as the separation of the substance particles takes place at right angles to the direction of pressure, the resulting fissure is parallel to the latter, and lies, therefore, in one or more of the meridian lines. It often begins at the equator as the most strained of the parallel circles, and runs either some distance only towards the pole of pressure, in which case there is an indirect fracture, or up to the pole. Messerer and Von Wahl call such cases fractures by rupture (*Berstungsbrüche*). Under pressure from the direction of the poles, not only the parallel circles, but also the meridians, experience changes of form which may eventuate in a breaking of the continuity. Here the polar curve is flattened, while the equatorial curve is increased, the result being a compression of substance particles on the inner surface, and a separation of the same on the outer surface. If this is carried to an extreme, a fracture ensues, beginning at the tabula externa, and extending on the periphery of the flattened segment at right angles to the meridian circle and the axis of pressure. Von Wahl calls such fractures, in which the particles are forced over or against one another, *Biegungsbrüche* (fractures by bending). But in considering from these points of view the fractures met with in practice, two reservations must be made. Firstly, the elasticity of the skull is but imperfect, nor is the skull's resistance the same in every place, nor its shape a perfect sphere; and, secondly, it is but seldom that there is one simple pressure, there being nearly always in addition an element of concussion varying in significance up to the extreme case of a gunshot-wound. The consideration of the elasticity of the skull is of most importance in cases of pure pressure, for there the point of impact is not so much endangered as the weakest part of the skull. Hence in cases of pressure on the forehead, back, or sides of the head, fissures of the base running in a typical direction are invariably observed. This is not the case in gunshot injuries, owing to the shortness of the time during which the force is exerted. Generally speaking, fractures by rupture occur at the base, and fractures by bending at the convexity of the skull; but striking exceptions to this rule are the typical star-shaped fractures of the vault and the ring-shaped fractures of the base.

204. *Langenbuch on Resection of a Left-sided Hepatic Lobe.*—A woman, aged 30 years, who had been successfully treated in 1886 for severe erysipelas migrans, informed Dr. Langenbuch that she had been suffering for eight years from a painful swelling in the abdomen (*Deutsche med. Zeitung*). The pain, worse when she was standing, was alleviated by her lying on her stomach. If she lay on her back she had palpitation, shooting pains in her head and legs, and distressing nervous sensations. Her stomach was consequently in a very bad condition. She wished to have the tumour removed. Although there was outwardly scarcely anything perceptible, a tumour of the size of a fist was found in the upper part of the abdomen, exactly in the median line of the epigastrium, extending symmetrically towards both sides, and from the ensiform process downwards to about 6 centimètres above the navel. It was perfectly smooth, with its lower end larger and rounded off; the upper edge was but slightly movable; it was of firm and elastic consistency, nowhere fluctuating. Percussion was dull in the middle, but there was full intestinal sound laterally and downwards, losing itself upwards in hepatic dulness. The diagnosis being doubtful, a trial incision, with a view to possible extirpation, was made, laying bare a large constricted hepatic lobe, extending wholly to the left of the gall-bladder. This explained the pressure, especially in the supine position, on the pylorus, duodenum, the loops of the small intestine, aorta, pancreas, nerves, and ganglia. Relying on reparative processes on the part of the healthy hepatic tissue, Langenbuch determined on extirpation. He formed from the ligamentous bridge several ligated pedicles, and then, leaving a knot of tissue, cut off the constricted lobe. Though every precaution had been taken, violent hæmorrhage set in some time after the wound had been closed, and the abdomen having been re-opened during a sudden fainting fit of the patient, all parts were found to be literally filled with blood. This was removed with sponges, and the still bleeding vessels ligatured. The wound was again closed and healed without further disturbance. But a moderate ascites set in, perhaps, as Langenbuch suggests, partly as a result of the excessive hydræmia from long-standing erysipelas and the cardiac weakness caused by the profuse hæmorrhage, and partly from the restriction of the circulation in the liver; for other parts of the body became œdematous. After twice puncturing, the ascites disappeared. The patient was discharged as cured. JOHN ELLIOTT.

205. *Veliaminoff on Exploratory Laparotomy in Tubercular Peritonitis.*—Dr. Nikolai A. Veliaminoff, of St. Petersburg, describes (*Vratch*, No. 41, 1887, p. 796) the case of a weak and emaciated soldier, aged 23, who was admitted to the Krasnoselsky Military Hospital on account of abdominal pain and fever (the evening temperature being 39° C., the morning one normal). 'A horseshoe-like, knobby, almost unmovable tumour' was felt deep in the abdominal cavity to the right from the navel. The diagnostic dilemma was 'either displaced kidney or peritoneal tuberculosis, with softening of the retro-peritoneal lymphatic glands.' The patient's state steadily going from bad to worse, the author performed an exploratory abdominal section. The whole peritoneum was found to be densely studded with tubercles, while there were present two congeries of the retro-peritoneal glands, each as large as a middle-sized fist. A 'toilette' of the peritoneal

cavity was thoroughly made, and the wound closed with sutures. The latter were removed on the eleventh day. The patient bore the operation quite well. His general state soon markedly improved, and on the twenty-ninth day he was sent home to his native village. Dr. Velïaminoff points out that he undertook exploratory laparotomy in tubercular peritonitis quite deliberately, while in thirty similar cases, collected by Dr. Kuemmel from international literature, the abdomen had been opened by the surgeon, who expected to find some other disease, and not tuberculosis of the peritoneum. Absence of ascites forms another interesting feature of Dr. Velïaminoff's case. [Referring to the subject, Prof. J. P. Lazarevitch says that, as regards a differential diagnosis between an enlarged or displaced abdominal organ (*e.g.* kidney) and a tumour (*e.g.* tubercular retro-peritoneal glands), a very useful point for settling any doubts may be found in elasticity of the structure examined. All abdominal parenchymatous organs possess a considerable elasticity, which is entirely absent in the case of a congeries of degenerated glands.—*Rep.*]

206. *Velïaminoff on a Case of Compound Fracture of the Skull.*—Dr. Nikolai A. Velïaminoff records (*Vratch*, No. 41, 1887, p. 796) the case of a soldier, aged 32, who was knocked down by a big baggage-waggon, the wheels passing over his face. He was picked up in an unconscious state and immediately brought to the Krasnoselsky Military Hospital. One of his upper jaws was found to be broken into two pieces; both of the zygomatic bones were quite loose, the nasal bones and turbinated bodies crushed, the body of the lower jaw fractured at two spots, and the maxillary condyles wholly severed. The lacerations of the soft parts were cleansed, disinfected and sutured, an ice-bag applied to the head, and irrigations of the nasal and oral cavities ordered. Several hours later the man recovered his senses. On the third day a violent rigor occurred, the temperature rapidly rising up to 40° C. Having survived seventy-two hours, he died from septic meningitis. At the necropsy, besides the lesions enumerated above, there were found also a transverse fracture through the whole basis of the skull, and diastasis of all temporal osseous sutures on both sides. Dr. Velïaminoff justly expresses his surprise in regard to the fact that a man with such truly formidable injuries could survive for full three days.

207. *Velïaminoff on a Rare Case of Compound Fracture of the Skull; Secondary Hernia Cerebri; Complete Recovery.*—At a meeting of the St. Petersburg Medical Society, Dr. Nikolai A. Velïaminoff reported (*Vratch*, No. 41, 1887, p. 796) the case of a young recruit who was brought to the Krasnoselsky Military Hospital a couple of hours after his having been violently kicked about the head by a horse. He was in an extremely excited and delirious state, shouted, screamed, and threw himself about so furiously that he could only with great difficulty be put to bed and kept there by the help of four strong men; he had no control over his sphincters. In his right temporal region, somewhat above the auditory meatus, there was found a small wound of the scalp (inflicted by a nail of a horseshoe) communicating with a depressed fracture of the subjacent bone. Abstaining from a primary trephining (in accordance with Bergmann's teachings), the author limited his first aid to thoroughly cleansing and disinfecting the wound and inserting a plug made of iodoform gauze. The cerebral symptoms, however, continued unabated, while there appeared, in addition, a complete left hemiplegia and fever (38°·5 C.). These phenomena induced the author, on the second day, to explore the seat of injury and to remove (by means of a chisel) several depressed and wholly detached fragments. It was found on this occasion that there was a rent in the dura mater, through which brain-substance was oozing. The membrane was split up (by means of Cooper's scissors), the wound plugged with iodoform gauze, and an antiseptic dressing applied. The operation was followed by a decrease of excitement and fever, as well as by return of consciousness and control over the bladder. Two days later, however, epileptoid fits (beginning on the left side of the face, subsequently spreading over the whole body, and ultimately remaining localised at the left side alone) made their appearance, to recur almost hourly. Since they were attributed to a cerebral irritation from the plug, the latter was replaced by a short drainage-tube. The fits disappeared, but a soporific state with fever supervened. The symptoms growing worse, the cutaneous wound was reopened on the eleventh day. A hernia cerebri, as large as a hen's egg, was found to be protruding from the hole in the skull. The wound was again washed out, plugged and dressed. From that time the patient's recovery went on quite satisfactorily. The cerebral hernia soon became covered with healthy granulations and gradually disappeared within the skull. When shown to the Society 113 days after the accident (*Vratch*, No. 52, 1887, p. 1011), the man was quite well. A perfectly smooth scar in the perfectly smooth temporal region represented the only sign of the injury. Dr. Velïaminoff draws attention to the great rarity of secondary cerebral hernia which, according to Professor Bergmann, may be caused either by an inflammatory œdema or by suppuration of the brain, and most frequently ends in death. Cases of recovery are exceptional. Such was, for instance, Professor V. Küzmin's case, in whose lucky patient, however, no retraction was observed, his cerebral hernia remaining of an undiminished size. Hence, Dr. Velïaminoff's case, with its perfect *restitutio ad integrum*, seems to be exceptional among the exceptional. [In the course of an interesting discussion which followed Dr. Velïaminoff's first communication, Dr. D. J. Vyvodtzeff remarked that it were better not to interfere with the dura mater; the cerebral hernia, he thought, had been caused by splitting up the membrane. In reply and self-defence, Dr. Velïaminoff said that he had felt justified in making his free incision, 1, on the ground of some new important researches carried out in Nussbaum's and Kroenlein's clinics. These researches show unmistakably that opening the dura mater in cases under consideration may be contra-indicated only by an intact state of the membrane, but is indicated when the latter is already injured and when clots, brain-substance, &c., are seen escaping through its rents; it were unwise to leave alone this very convenient way for the inroad of septic infection and death. And 2, on the ground of this simple and highly probable supposition that a fatal acute encephalitis could have easily and rapidly developed, if he had chosen to abstain from opening and thoroughly cleansing the dura mater. Besides, he felt sure that the cerebral hernia had occurred mainly from an œdematous condition of the (contused) brain, and not from his splitting up the membrane. In connection with

the case, Professor J. P. Lazarevitch pointed out that sometimes cases of severe fracture of the skull were met with, where the brain escaped any serious injury. About thirty years ago he, with Professor A. A. Walter, happened to come across a case illustrating his meaning. A boy, who was employed (at some Kïev glass-works) to attend a sausage machine, was struck by the pounder (a vertical beam, about 18 centimètres in diameter) on his occiput. An enormous depressed fracture, 'nearly as large as a half-a-fist,' was the result. In spite of this colossal lesion, 'everything ended favourably, though the treatment was limited for a long time only to the application of snow to the boy's head.'—*Rep.*] V. IDELSON, M.D.

208. *Curtis on Contusion of the Abdomen with Rupture of the Intestine.*—In the *American Journal of the Medical Sciences*, October 1887, p. 321, Dr. Farquhar Curtis contributes the essential part of an essay (the original of which has been deposited in the library of the New York Academy of Medicine) on the subject of Contusion of the Abdomen, with Rupture of the Intestine. The author has studied the subject by the aid of a series of experiments on dogs, and an analysis of 116 cases of rupture of the intestine, and of thirty-three cases of contusion of the abdomen, terminating in recovery. The practical conclusions drawn from this inquiry are as follows :—In the early stage, the treatment should be purely expectant, until symptoms of internal injury have appeared ; explorative laparotomy at this time is inadmissible. When symptoms of uncontrollable internal hæmorrhage or serious visceral injury appear, laparotomy is indicated ; but, when the diagnosis is uncertain, the operation should always be begun as an exploration. Great collapse is an absolute contra-indication to all operative interference. When rupture of the intestine is found, the best method of treatment is to secure the injured gut in the abdominal wound and form an artificial anus. This can be easily relieved by a later operation, when the patient has recovered his strength.

209. *Fox on Two Cases of Abdominal Section for Traumatism.*—In the *Med. Chronicle*, February 1888, p. 394, Mr. Collier has abstracted notes from the *Med. News* on some cases recently under the care of Dr. Fox. Case 1. A man, aged 32, had been stabbed in the abdomen with a penknife ; the wound was an inch below the ribs on the right side and over the seat of the liver ; a great amount of blood had been lost and the patient was suffering from severe shock. He was placed under an anæsthetic, and the wound enlarged, a considerable quantity of blood was removed from the abdominal cavity, and a bleeding wound found on the right lobe of the liver. This was stopped with Paquelin's cautery, the abdominal cavity washed out with warm water, and the abdomen stitched up and dressed. The patient sank twenty hours after the operation. At the autopsy there was no evidence of recurrence of hæmorrhage, and no commencing peritonitis. Case 2. A blacksmith, aged 18, was shot with a pistol in the abdomen ; the bullet-wound was one and a half inches to the left and just below the umbilicus. There were no definite symptoms, but the abdomen was opened up about three hours after the injury, as it was known the ball was in the abdomen. The bullet was found to have passed through the omentum, the transverse colon, the jejunum, and the mesentery, and was lost in the muscles of the back. The four intestinal wounds were stitched with fine silk, Lembert's suture being used. The abdominal cavity was washed out with warm water, a drainage-tube inserted, and the abdomen stitched up. The tube was removed after thirty-six hours. On the third day the bowels were moved naturally, and on the eighteenth day he was allowed to get up. Case 3. A man, aged 28, of intemperate habits, was suffering from a stab-wound of the abdomen, two inches above and one inch to the left of the umbilicus, through which the omentum protruded. He was also stabbed in the left side of the chest, the left lung being wounded, and the left pleural cavity filled with blood. The abdomen was opened, and the protruding omentum was removed, its base being tied with catgut. The wound was then stitched up and dressed. The abdominal wound suppurated, but without causing peritonitis ; at the same time pneumonia set in, but this cleared up in a few days ; then the blood in the pleural cavity became purulent, and the patient died of empyema on the thirty-fourth day. On making a *post-mortem* examination the abdominal cavity was normal, but the stump of omentum was attached to the abdominal wound. Case 4. A healthy man was stabbed in the abdomen, about five inches to the left of the umbilicus. The omentum protruded and was treated as in the last case ; the abdominal wound healed by first intention ; the patient was discharged well on the twelfth day. RICHARD NEALE, M.D.

MEDICINE.

RECENT PAPERS.

210. RICHARDSON.—On Heart-disease from Physical Shocks and Strains. (*Medical Press and Circular*, February 1888, p. 181.)

211. LEWTAS.—On a Case of Tumour of the Intestine ; Symptoms Simulating Biliary Colic. (*Brit. Med. Jour.*, February 1888, p. 415.)

212. SUTTON.—On a Case of Worm in the Stomach. (*Lancet*, February 1888, p. 368.)

213. WORRALL.—On a Case of Fæcal Accumulation. (*Australian Med. Gazette*, December 1887, p. 58.)

214. OSLER.—On the Cardiac Relations of Chorea. (*American Journal of Med. Sciences*, October 1887, p. 371.)

215. BARTELS.—A Case of Pernicious Anæmia with Icterus. (*Berliner klin. Wochensch.*, No. 3, 1888.)

216. HAYEM.—A Case of Hæmoglobinuria in Rheumatism. (*Gazette des Hôpitaux*, Feb. 16.)

217. GALLIARD, DR.—On a Case of Acute Pneumonia with Initial Hyperpyrexia, and followed by Phlegmasia Dolens. (*France Médicale*, February 1888.)

218. SÉE, M. GERMAIN.—On Anæmia and Pseudo-Anæmia. (*Union Médicale*, Feb. 21, 1888.)

ART. 210. *Richardson on Heart-disease from Physical Shocks and Strains.*—In the *Medical Press and Circular*, February 1888, p. 181, Dr. B. W. Richardson records some interesting cases of heart-disease from physical shocks and strains. One illustration given is that of a man who was repairing a first-floor window, when he slipped and fell. He came down on the pavement straight upon his feet, then dropped to the earth, and was taken up dead. On making a *post-mortem* examination the pericardium was found to be filled with coagulated bright-red blood, which had escaped into it from a small rupture in the aorta immediately above the aortic semilunar valves. There was nothing else abnormal

to be seen, though every organ was carefully examined. The author considers the rupture was due to a simple physical concussion, similar to what workmen call 'the water-hammer,' such as is heard when the tap of a cistern is suddenly turned off whilst the water is running. A series of slight but frequent concussions lead to aneurysmal dilatation in the ascending part of the aorta in a similar manner. In the old posting days the riders were so commonly affected with this disease that it obtained the name of 'post-boy's disease,' and nowadays aneurysm is very common in soldiers who are very hard riders on horseback, and in artillerymen, who are subject to serious concussion from riding on gun-carriages. Another case cited is that of a youth who was very fond of athletics, and was captain at his school in all the games. One day, during a very exciting football match, in which he had made himself breathless, he by accident fell heavily to the earth. He recovered himself quickly, but was unable to continue the game. He felt a sense of failure in the lower limbs and lower part of the back, followed by sharp pain in the bowels, which lasted some hours. He was led home and put to bed, suffering from excessive palpitation of the heart. The cardiac symptoms passed into a chronic form, and he was obliged to leave school. Three months after the accident he was seen by the author, who found him in a very weak state of body and languid in mind. He could not take any exercise, the least exertion causing pain and dyspnœa; and an attack of severe palpitation came on with the least excitement. On examining the chest it was noticed that the heart's impulse was extended and intensified, but the heart-sounds were fairly good and not accompanied by any murmurs. The diagnosis arrived at by the author was that the nervous supply of the heart had sustained a shock by the fall, at a time when the heart was over-distended and over-excited. Another illustration is given of a man who was a leader of the people and was proposed for Parliament, but was opposed, and set upon whilst making a speech; he was much knocked about, and was led away fainting. From this time onward he suffered from palpitation, followed by breathlessness and a degree of painful disablement which rendered his life miserable. When seen by the author some years after he was in the last stage of his disease. He suffered from frequent attacks of angina, he slept only in snatches, and could never lie down perfectly recumbent. Physical examination revealed a large area of cardiac pulsation, and an extremely intermittent heart action; with the stethoscope no one sound could be identified, 'all was tumult.' Sometimes the intermission was so long that it seemed doubtful if the ventricle would ever beat again. It was these lapses that prevented him sleeping, for at the moment he fell asleep a long intermission would come and cause him to start suddenly, as it were, from death to life; then would succeed a paroxysm of fluttering, palpitation, and dyspnœa which no remedy seemed to cure. The diagnosis of this case was dilatation of the left ventricle, aortic and mitral inefficiency, with extreme cardiac paresis, causing the constantly recurring intermission. After several weeks of suffering he died during one of the periods of intermission. The author remarks on the important practical fact that middle-aged men, who are affected with mental worry, often meet with slight shocks and concussions which are scarcely noticed at the time, but which lay the seeds of future trouble in the shape of cardiac irregularity or palpitation.

211. *Lewtas on a Case of Tumour of the Intestine; Symptoms Simulating Biliary Colic.*—In the *Brit. Med. Jour.*, February 1888, p. 415, Dr. Lewtas records the case of a patient, aged 45, who had lived in India for twenty years, and was seized about 2 A.M. on June 4 with agonising pain in the right side of the abdomen. Relief was obtained at the time by injecting morphine, but next day the pain returned with greater intensity, and chloroform had to be given by inhalation. The case seemed one of gall-stone colic, and directions were given to wash the fæces through muslin. On June 6 the patient stated he had passed a 'piece of flesh,' which, on examination, proved to be a lymphoma of nearly square outline, measuring one inch and a half along each side, and a quarter of an inch in thickness. After this a dull pain remained in the abdomen for a few days, but the patient soon regained his usual health, and up to date has had no recurrence of symptoms. The case is interesting, as it is not often mentioned in text-books that in diagnosing a case, whether it is biliary colic or not, one has to look out for such cases as the above.

212. *Sutton on a Case of Worm in the Stomach.*—In the *Lancet*, February 1888, p. 368, Dr. S. W. Sutton, of Quetta, records the case of a Mussulman, aged 28, to whom he was urgently sent for at 11 A.M. one morning. The man had been well until 6 A.M. when he was seized with diarrhœa. When seen by the author he was collapsed, and complained of cramps in his feet and a constant vomiting and diarrhœa. A dose of laudanum and dilute sulphuric acid was given, hot bottles were applied to the feet, and poultices to the abdomen; the diet to consist of nothing but milk and brandy. There was no suppression of urine, or the case would have been put down to one of cholera, which was raging in the neighbourhood. Next day the vomiting still persisted, but the diarrhœa was less, and the extremities were still very cold. Another dose of laudanum and sulphuric acid was given, and champagne with essence of meat was ordered. Next day the patient was better, but the vomiting was incessant. On the fourth day Dr. Sutton was suddenly sent for as the man had 'vomited up something solid.' This turned out to be an ascaris lumbricoides, seven and a half inches long. The next day the man was quite well.

213. *Worrall on a Case of Fæcal Accumulation.* In the *Australasian Med. Gaz.*, December 1887, p. 58, Dr. Worrall records a remarkable case of fæcal accumulation in a young, delicate, strumous-looking girl of 13 years. She was brought to the author in September 1887 suffering from an enlarged abdomen, which had been first noticed two months previously, and had been steadily increasing since. There was no history of any illness, and her mother thought her bowels were regularly moved. The abdomen measured 27 inches round the most prominent part, and, on examination, a solid tumour, neither painful nor tender, was found to fill the whole abdomen; it was of stony hardness, with a nodulated and irregular surface. After admission into the hospital, the bowels were moved several times daily by a dose of liquorice powder and enemata. On examination under chloroform the rectum was found still full of fæces; more aperients were ordered, and for the next ten days there was constant diarrhœa, with a temperature of 101° F. each night, and a pulse of 130. A diagnosis of fæcal obstruction due to the

pressure of a tumour, probably malignant, was made, and an operation decided upon. On opening the abdomen Dr. Worrall found a large cyst, fluid above and solid below, occupying almost the entire abdominal cavity. On close examination this proved to be the ascending colon enormously hypertrophied and dilated; it was decided to close the wound at once, which was done with fifteen wire sutures. The next day the patient was very comfortable, but the bowels were acting continuously; nothing but beef-tea, and a little beef-peptonoids were given, the temperature soon became normal, and on the sixth day the wound had united firmly, the abdomen was concave, and not a vestige of the tumour remained. The patient was discharged on the 14th day in sound health. The case is interesting in showing how one may be mistaken in diagnosis, and is another proof of the harmlessness of exploratory abdominal section when performed with due care.

214. *Osler on the Cardiac Relations of Chorea.*—In the *American Jour. of the Med. Sciences*, October 1887, p. 371, Dr. William Osler contributes an exhaustive paper on the subsequent heart-history of cases of chorea. The author has re-examined 110 cases treated at the Philadelphia Infirmary for Nervous Diseases between 1876 and March 1885, the examination in each case being made more than two years subsequent to the attack. In forty-three cases the heart was normal; in fifty-four there were signs of organic disease; and in 13 there was functional disturbance. The following conclusions are drawn from the paper. In a considerable proportion of cases of chorea, the complicating endocarditis lays the foundation of organic heart-disease. In a majority of the cases the cardiac affection is dependent on rheumatism. As the presence of an apex systolic murmur in chorea is usually an indication of the existence of mitral valvulitis, as much care should be exercised in this condition as in the acute endocarditis of rheumatism. Rest, avoidance of excitement, and care in convalescence can do much to limit a valvulitis, and may possibly prevent chronic nutritional changes in the valves wherein lies the main danger. Richard Neale, M.D.

215. *Bartels on Pernicious Anæmia with Jaundice.* Two cases of the above complication have been recently observed by Georgi and Ewald (*see* the London Medical Recorder for Jan. 20, p. 3). Dr. Bartels' case occurred in 1886. Shortly summarised the facts were as follows:—A well-built, previously healthy young man was received into the hospital of the garrison on March 25, 1886, on account of a superficial ulcer on the left leg. He had first noticed it about a week before, and could give no cause for its existence. In spite of rest and careful treatment, it did not heal completely till May 1, when he was discharged. The internal organs were apparently healthy. On May 17 he was again admitted, the ulcer having opened a few days after leaving the hospital. In the middle of July the proglottides of tænia solium were remarked, and the usual treatment was adopted. A tænia about seven feet long was expelled, but no head was found. Next day intense icterus set in, with furred tongue, anorexia, and lassitude. This subsided by Aug. 3, and the leg being now well again, he was discharged. He did work up to Aug. 10, when he was readmitted to hospital with a sore leg. During September he complained much of anorexia, but no icterus appeared till early in October (the wound had again healed). [Physical examination, hitherto negative, now revealed enlargement of liver and spleen. The blood was pale and only slightly coagulable; the white corpuscles were in excess, the red corpuscles no longer formed rouleaux, and appeared in all sorts of shapes (as described by Quincke). The retina appeared normal. Inquiry revealed the fact of epistaxis in the previous spring. The fæces were bile-stained, and biliary colouring matter was found to be present in the urine by both Marechal's and Gmelin's tests, but no biliary acids. Severe attacks of epistaxis ensued. In November a large dose of extract of male fern caused the expulsion of a large tænia, with the head this time, but the patient got weaker daily, presented œdema of both legs, lost control of the sphincters, and died in gradually increasing coma on Nov. 14. The diagnosis was confirmed by the autopsy, which revealed no positive cause of the symptoms, only fatty degeneration (secondary) of the heart and kidneys. This makes the eleventh recorded case of pernicious anæmia with icterus. The icterus in July Bartels looks upon as due to intestinal catarrh (after the male fern and pomegranate), the later icterus as truly hæmatogenous. The hepatic and splenic enlargements are also rare in this disease. Dr. Bristowe has recently described cases of this complication (*Brit. Med. Jour.*, March 3, 1888, p. 489). E. J. Edwardes, M.D.

216. *Hayem on a Case of Hæmoglobinuria in Rheumatism.*—The *Gazette des Hôpitaux* of Feb. 16 gives a summary of a communication made by M. Hayem at a meeting of the Société Médicale des Hôpitaux respecting a case of hæmoglobinuria in rheumatism. The patient, a woman of 37, was attacked with rheumatism in 1886. A second attack occurred in 1887. The patient was suckling her sixth child. Six days after the second attack appeared she entered the hospital. The urine was completely red; there was pain, adynamia, rheumatic œdema in the arms and hands, copious perspiration, rheumatic pneumonia in the right side. The pain disappeared; pericarditis declared itself. The urine, which was scarce at first, became abundant; the pneumonia and pericarditis were modified. The patient recovered. She did not lose her milk, and began to suckle her child again. The urine presented the characteristics of hæmoglobinuria; it contained no red corpuscles, but a large proportion of albumen and white corpuscles. The blood was normal. This case shows that hæmoglobinuria may appear during an attack of acute rheumatism. It differs from hæmaturia, in that the urine contains neither red corpuscles nor stroma. Rheumatic nephritis evidently existed in the case described by M. Hayem. The serum of the blood was not modified during the attack of hæmoglobinuria, and the red corpuscles were not dissolved by the urine. M. Hayem ascribes the hæmoglobinuria to the existence of a renal lesion. M. Bucquoy cited a case observed by him twenty years ago of paroxysmal hæmoglobinuria *à frigore*. The patient passed black urine when he was out of doors. The urine became normal when he was indoors. The patient was rheumatic, but not albuminuric. At the time paroxysmal hæmoglobinuria *à frigore* was not properly known. M. Hayem observed that such patients should be regarded as suffering from the influence of cold. The renal lesion, which undoubtedly exists, is not persistent; it is only during the attacks of hæmoglobinuria that albumen is observed in the urine. M. Albert Robin cited two cases of hæmoglobinuria. In the first

instance the patient was seized with a genuine attack of acute rheumatism. The urine became red; there was considerable albuminuria. Symptoms of inflammatory nephritis shortly appeared. In the second instance hæmoglobinuria appeared before rheumatism. In both cases there were unmistakable signs of severe inflammatory nephritis.

W. VIGNAL.

217. *Galliard on a Case of Acute Pneumonia with Initial Hyperpyrexia, and followed by Phlegmasia Dolens.*—The patient, 34 years of age, with good antecedents, complained, on Nov. 29, of a pain in the left side of the chest, which had come on that morning. No rigor, but general malaise and fever. No auscultatory signs could be detected. A blister was applied to the site of pain. On the third day the temperature was 107°·6, pulse 132. Still there were no positive auscultatory signs. Six-grain doses of quinine were ordered, and by the evening the temperature had commenced to fall, coming down to 99° by the following day. The disease then ran the usual course, with defervescence on the eleventh day, without delirium, until the thirteenth day, when the patient complained, on awakening, of severe pain in the calf of the left leg, which appeared to be swollen. On the following day the leg was decidedly œdematous, and the external saphenous could be felt as a hard cord. Opiate fomentations were applied, but by the seventeenth day the entire limb, including the foot, was swollen and painful. No redness of the skin, and there was no effusion into the knee-joint. The femoral vein was painful as far as it could be traced. In the course of a few days, however, the œdema became less, and ultimately the patient made a perfect recovery.

218. *Sée on Anæmia and Pseudo-Anæmia.*—Histological and histo-chemical researches have rendered it possible to distinguish true anæmia from a variety of conditions more or less resembling it in outward appearance, and hence the necessity for careful hæmatoscopic examinations by the medical man of the present day. Cases of true anæmia may be arranged under one or more of three heads. 1. Cases characterised by a diminution in all the constituents of blood, as from hæmorrhage. 2. A loss in quantity and functional activity of hæmoglobin, especially of the latter. In chlorosis, for example, the number of corpuscles may remain about normal, but the chemical activity of the hæmoglobin is lessened. 3. Anæmia, of a kind which may be approximately described as *hypoglobulie*, in which the number of red blood-corpuscles is diminished. The so-called 'spontaneous' anæmia, which comes under the third head, is often confounded with essential or pernicious anæmia, due to the presence of the *ankylostome duodenalis*, a disease of parasitic origin. Spontaneous anæmia proper is a malady the severity of which bears a fixed relation to the diminution in number of the red corpuscles. Its etiology is still obscure, the influence of the liver and spleen in its production not having been proved. It is to be remarked that the reducing power of the hæmoglobin is increased in this form. With respect to pseudo-anæmia, patients are frequently met with who complain of feebleness, headache, gastric disorders, and various subjective nervous symptoms, just as in true anæmia. The so-called hæmic bruits may even be present. Nevertheless, on examining the blood, none of the foregoing alterations in the blood are observable. These cases of pseudo-anæmia also admit of being arranged in three categories:—1. Cases of inanition, either absolute, as in persons who take insufficient food, or relative, as in those who do not eat the proper things, or are unable to digest them. To these must be added the cases of respiratory inanition in persons who eat and digest well, but suffer from a deprivation of fresh air and exercise. 2. Cases of simple debility, the so-called neuro-asthenics, though not necessarily of nervous origin. 3. Lastly, there is the numerous class of toxic pseudo-anæmias, such as that due to lead, mercury, &c.; of miasmatic origin, such as that due to malaria; and finally of virulent origin, such as syphilitic anæmia or that of cancer or prolonged suppuration. A proper nosological classification of the cases with which the medical man has to deal will do much to assist him in affording relief.

ALFRED S. GUBB.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

219. BOUSQUET, DR.—On the Ergot of Oats. (*Marseille Médical.*)

220. WALLIS, MR. C. J. BOYD.—On Cocaine. (*Journal of the British Dental Association*, Jan. 16, 1888.)

221. MERCIER, DR.—On the Use of Chloral in Diphtheria. (*Rev. de Thérap.*, Feb. 15, 1888.)

222. TRIPIER, DR.—On the Use of Hot-water Injections in the Treatment of Lead Colic. (*Bull. Gén. de Clin. et de Thérap.*, Feb. 23, 1888.)

223. STEWART, DR. JAMES.—On the Present State of Cardiac Therapeutics. (*Canada Medical and Surgical Journal*, February 1888.)

224. CHÉRON, DR.—On the Use of Chloride of Ammonium and Hypodermic Injection of Crystallised Phosphate of Sodium in Chronic Pelvic Peritonitis. (*Rev. Méd. Chir. des Femmes.*)

225. LAPLACE, DR.—On the Antiseptic Value of Sublimated Dressings. (*L'Union Méd.*, Feb. 19, 1888.)

226. EVANS, DR.—On Antipyrin and Antifebrin. (*Canada Med. and Surg. Jour.*, February 1888.)

227. SONNENBERGER, DR.—On the Treatment of Whooping-cough by Antipyrin. (*Lyon Médical*, Feb. 12, 1888.)

228. FRATY, DR.—On Antipyrin in Epilepsy. (*Lyon Médical*, Feb. 5, 1888.)

229. MARTIN, M.—On the Use of a Combination of Antipyrin and Cocaine in Dental Anæsthesia. (*Lyon Médical*, Feb. 12, 1888.)

230. MCCONNELL.—On the Uses of Cannabis Indica. (*Practitioner*, February 1888, p. 95.)

231. THOMPSON.—On the Use of the Hydrobromate of Hyoscine. (*Lancet*, February 1888, p. 218.)

232. KORONA, DR. ISÄÄK I.—On the Therapeutic Value of Strychnine in Alcoholism. (*Proceedings of the Caucasian Medical Society*, Dec. 13, 1887, p. 390.)

233. POTTER, DR. F. H.—On a Peculiar Effect of Cocaine. (*Buffalo Med. Journal.*)

234. SHOEMAKER, DR. J. V.—On Collinsonia Canadensis. (*Medical Register.*)

ART. 219. *Bousquet on the Ergot of Oats.*—While travelling in Oran (Algeria) M. Bousquet had an opportunity of examining some ergot from oats. It is an elongated body of a black colour, measuring from 10 to 12 millimètres in length, and 3 to 4 in thickness. Its therapeutical effects are as prompt and as lasting as the ergot of rye, but there is, in addition, a general stimulating effect which is useful in the cases of exhaustion following uterine hæmor-

rhage. It was extensively used in Algeria last year on account of the rye famine.

220. *Wallis on Cocaine.*—In No. 1 case, the patient was a delicate, nervous lady, who required the removal of some troublesome roots. Two grains of cocaine dissolved in 30 minims of ether were injected, and answered admirably, the stumps being removed, apparently without any pain. Case 2 was a healthy robust man of 50, who was injected with one grain of cocaine in ten of water. This produced a curious but not disagreeable effect upon him, which passed off in the course of a few minutes. Case 3 was a lady, not at all nervous. One and a half grains of cocaine were injected, but part of it escaped and ran down the throat. The tooth was removed, when the patient nervously exclaimed that she was unable to swallow, but she was soon convinced of the contrary, and showed no further anxiety. On his own person Mr. Wallis had experimented extensively, having taken as much as five grains at a time internally with only rarely any disagreeable sensations. The latter were easily overcome by a little brandy and ether, or nitrite of amyl. The solution should always be fresh and clear, and the re-crystallised salt is probably preferable. The hydrochlorate may be tested (and purified) by dissolving in a minimum quantity of absolute alcohol and precipitating with ether. Another test is by dissolving one grain of the salt in two ounces of water, to which solution two drops of solution of ammonia are added, and the whole well mixed. With a good sample well-marked striæ at once form, followed by a copious crystalline deposit. With inferior products there is either no precipitate, or the liquid merely becomes milky. Most samples of cocaine appear to contain from 1 to 2·5 per cent. of *hygrin*, a viscid alkaloid of the consistency of treacle. It has a slight burning taste, is irritating, and dissolves freely in ether, chloroform, or alcohol. He prefers the alkaloid to the salt, notwithstanding the greater solubility of the salt. In Peru, coca is chewed with lime, and Mr. Wallis recommends that the parts be washed with an alkaline solution before injection. Ether dissolves the alkaloid readily, and is a suitable medium for injection, its stimulant action being a valuable effect. The *æther purus* B.P. is that generally used.

221. *Mercier on the Use of Chloral in Diphtheria.*—In cases of diphtheria very excellent results were obtained from the use of chloral. Before giving chloral, if the tongue be much furred, Dr. Mercier administers an emetic—preferably ipecacuanha, in powder. He then gives from one and a half to five grains of chloral, in the form of a syrup, every half-hour, taking care to give food and drink beforehand, so as to leave the syrup in contact with the throat. The administration of liquids before the chloral prevents the latter giving rise to gastric pain. The drug generally stopped the further progress of the disease, and within forty-eight hours the false membranes disappeared, and the raw surface left was gargled with an astringent lotion. The treatment is only of use in the early stages of the disease, and is without benefit when the larynx has become involved.

222. *Tripier on the Use of Hot-water Injections in the Treatment of Lead Colic.*—Great relief may be obtained in lead colic, the rectal and vesical tenesmus of ataxia, and in dysentery, by injections of water heated to 45°, or even 48° C. In dysentery the hot water calms the pain and lessens the frequency of the motions. The method is equally applicable to the treatment of hæmoptysis and obstinate vomiting. The effect of hot vaginal injections in checking uterine hæmorrhage is well known, and Dr. de Mussy has employed hot-water bags to the spine with success for the same purpose.

223. *Stewart on the Present State of Cardiac Therapeutics.*—Dealing with the treatment of acute inflammatory affections of the endocardium, Dr. Stewart points out the value of rest. Rest means low blood-pressure, and consequently less work for the valves to do. This may be assisted by the administration of drugs which lower the blood-pressure, such as chloral. He disapproves of blisters over the precordia and blood-letting, the former because injurious, and the latter because of only temporary benefit. With reference to the treatment of cardiac disease during the period of compensation, he speaks very favourably of Oertel's plan, which consists in strengthening the muscular system, comprising the heart, by regular and graduated out-door exercise; aiding nutrition by a diet rich in albumen, and by careful regulation of the quantity of fluids ingested. This plan of treatment is probably adapted to cases of threatened heart failure from commencing fatty degeneration and from deformity of the chest or disease of the lungs. When loss of compensation renders exercise impossible, then digitalis is of great value. The first marked effect of heart failure is diminution in the aortic blood-pressure, as shown by a diminished excretion of urea. So long as digitalis causes an increase in the quantity of urine, so long is it safe to proceed with its administration. The diuretic power of digitalis is entirely dependent on its power of raising an abnormally low blood-pressure, and to effect this it must be given in full doses. When the urine, after being increased in quantity by digitalis, considerably diminishes, then the drug should be at once withdrawn. This decrease is a warning never to be neglected. As to the quantity of digitalis required to bring about diuresis, great differences are found, persons varying greatly in their susceptibility to the influence of the drug. Forty minims of the tincture four times daily for three days will, in the majority of cases, bring about the diminution, but as much as half an ounce daily in divided doses is sometimes required. The best results are obtained by absolute rest in bed with digitalis in full doses. Other drugs besides digitalis possess the power of slowing the heart and increasing the blood-pressure. Scillain, helleborein, oleandrin, adonidin, convallamarin, and, finally, strophanthin. Mercury is a direct diuretic. Hence the value of the old combination of digitalis, squills, and mercury (Baly's pill). All these remedies are useful in particular cases, and Dr. Stewart speaks very hopefully of strophanthin, the latest addition to our list of heart medicines. He also speaks very favourably of the effect of caffeine, especially of the natro-salicylate of caffein. It is a powerful direct diuretic, acting on the epithelium of the convoluted tubules, and probably on that of the glomeruli. It acts very promptly. A combination of digitalis and caffeine affords very excellent results.

224. *Chéron on the Use of Chloride of Ammonium and Hypodermic Injection of Crystallised Phosphate of Sodium in Chronic Pelvic Peritonitis.*—Where the temperature does not exceed 99° F. he gives, by the mouth, from one half to one drachm doses of chloride of ammonium, three or four times a day.

The solution of phosphate of sodium for hypodermic injection is as follows :—Crystallised phosphate of sodium, 6 grammes ; sulphate of sodium, 6 grammes; distilled water, 120 grammes. Filter the solution, which must be freshly prepared, and rub the site of puncture to aid absorption. To be repeated about once a week.

225. *Laplace on the Antiseptic Value of Sublimated Dressings.*—When perchloride of mercury comes into contact with an albuminous substance, the sublimate is precipitated as an insoluble albuminate of mercury. This takes place at the surface of wounds when sublimated dressings are employed, and the value of the dressing as an antiseptic is largely affected thereby. Dr. Laplace suggests the employment of tartaric acid to prevent this formation of insoluble salts. The formulæ he employs are (1) for washing and irrigating wounds :—Hydrarg. perchlor., 1 gramme; acid tartaric, 5 grammes; distilled water, 1,000 grammes. In solutions for preparing antiseptic compresses the proportion of tartaric acid should be 20 grammes.

226. *Evans on Antipyrin and Antifebrin.*—Neuralgic affections attacking persons in the period of declining bodily vigour are often severe, lingering, and rebellious to treatment. In three cases, one of pain in right hypochondrium, a second of severe intercostal neuralgia, and a third of dorso-lumbar neuralgia, which had resisted other means of treatment, the hypodermic injection of from 5 to 10 grains of antipyrin not only afforded immediate relief but to all intents and purposes *cured* the affection. He had also found it of service in the pains of locomotor ataxia, and generally in cases for which morphine is used.

227. *Sonnenberger on the Treatment of Whooping-cough by Antipyrin.*—The results obtained in seventy cases of whooping-cough by means of antipyrin were very satisfactory. In very young children, the drug should be given three times a day in doses of from 1 to 3 grains. In older children and in adults the dose may be raised even to 15 grains. He gives it generally with a syrup of raspberries to disguise the taste. Under its influence the attacks diminish in frequency and the general condition of the patients improves. The results are more striking when the treatment is begun early in the disease. When this was done the disease ran its course in from three to five weeks with an average of from six to seven attacks of cough during the twenty-four hours.

228. *Fraty on Antipyrin in Epilepsy.*—In a thesis, presented before the Lyons Faculty of Medicine, M. Fraty discussed the influence of antipyrin on the convulsions of epilepsy. On twenty cases treated with antipyrin, two were discarded on account of certain hysterical complications which obscured the diagnosis. In seven, a marked moderating effect was noticed on the convulsions, and in one of them the crises were suppressed during treatment and recurred immediately on its cessation. In five cases the drug had to be abandoned on account of undefinable symptoms of malaise, but it must be observed that these five patients were the most disagreeable and obstinate of the hospital inmates. Two other patients refused to take antipyrin because of the nausea which followed its use. Lastly, three patients remained unaffected by the drug. He concludes (1) that antipyrin possesses an influence on epileptic convulsions, at any rate in some cases ; (2) its action resembles that of the alkaline bromides ; (3) that to obtain its effects it must be given in doses of from 40 grains to 2 drachms daily ; (4) that the moderating effect, when present, is transitory, and that the attacks recur more violently than ever on the cessation of the treatment and even during its continuance, if prolonged.

229. *Martin on the Use of a Combination of Antipyrin and Cocaine in Dental Anæsthesia.*—Concentrated solutions of cocaine, when used to produce anæsthesia for dental purposes, have given rise to toxic symptoms on various occasions. To avoid this M. Martin mixes with it antipyrin in the following proportions : Hydrochlorate of cocaine 1 grain, antipyrin 8 grains, water 20 minims. The injection into the gums of this solution does not produce anæsthesia as rapidly as the pure salt, but the condition lasts longer and is better marked.

ALFRED S. GUBB.

230. *McConnell on the Uses of Cannabis Indica.*—In the *Practitioner*, February 1888, p. 95, Surgeon-Major McConnell invites attention to the value of cannabis indica, when obtained from fresh preparations of the plant, in certain conditions not generally known. One of these is *anorexia*—loss of appetite consequent upon exhausting diseases, such as prolonged fevers, diarrhœa, dysentery, phthisis, &c. In these cases five to ten minims of the tincture, or $\frac{1}{4}$ to $\frac{1}{2}$ of the extract, have been found very useful, when given three times a day, half an hour before meals. Another condition is *dyspeptic diarrhœa*, and the diarrhœa which is associated, in the tropics, with defective action of the liver, and deficient secretion of bile, which are the earlier symptoms of what is known as the *diarrhœa alba* of the tropics (hill or tropical diarrhœa). Even in the more advanced stages of tropical diarrhœa, cannabis will sometimes prove very useful, in conjunction with mercury. The cannabis is given three times a day, in doses from ten to twenty minims, whilst a blue pill or grey powder is given every night at bedtime. The last condition in which the author has found cannabis useful is as a *hypnotic* in cases of chronic cardiac disease and in chronic Bright's disease. A dose containing 15 to 20 minims of the tincture given at bedtime, with 10 grains of chloral and 30 grains of bromide, will often act like magic, giving several hours' sleep, and alleviating the general distress of the patient.

231. *Thompson on the Use of the Hydrobromate of Hyoscine.*—In the *Lancet*, February 1888, p. 218, Dr. George Thompson writes that he has lately tried thn effect of small doses of the hydrobromate of hyoscine on patients in the Bristol Asylum. This drug was found to act as a certain hypnotic on all occasions, but it was of most use in chronic and recurrently chronic mania. It was used in the form of a solution containing 1 grain in 400 minims, the dose being from 2 to 4 minims ; a dose of 6 minims made the patient so 'drunk' that it is safer to use the smaller doses and repeat them if necessary. The effect on both sexes is about the same. There is marked sluggishness of all the motor functions, with depression of reflex activity, dizziness, dimness of vision, an ataxic gait, and dryness of the mouth and fauces ; all these symptoms are but faintly seen when only a proper medicinal dose has been given. In no case did the drug fail to produce the desired effect. The patient is quieted and falls asleep, but the sleep is not very deep, and at any stage there is no difficulty in rousing to the fullest ex-

tent of wakefulness, though he soon falls to sleep again. In acute mania where much restlessness and tendency to knocking about are the chief symptoms, it acts most beneficially. In mania of any form this drug is the best calmative we have. In some cases of general paralysis, attended by busy restlessness, with dry skin and some suppression of urine, a small dose puts the patient in a more comfortable state. In any sort of mania which appears to be accompanied by some form of cerebral disorganisation, as in old age, the patient will derive much benefit by being placed under the influence of this drug.—[Vide *Medical Digest*, Section 1,380 : 4, where a large number of observations are noted confirmatory of the very favourable opinion formed by the author of the value of the drug in the treatment of acute mania and allied conditions.—*Rep.*]

RICHARD NEALE, M.D.

232. *Korona on Strychnine in Alcoholism.*—In a preliminary communication to the Caucasian Medical Society, Dr. Isääk I. Korona, of Tiflis, states (*Proceedings of the Caucasian Medical Society*, Dec. 13, 1887, p. 390) that, in order to study the alleged antagonistic action of strychnine to alcohol, he has carried out during the last eighteen months a course of observations on eleven alcoholic subjects (four women and seven men), four of whom were suffering from dipsomania, four from chronic alcoholism, and three were habitual drunkards, without presenting any morbid symptoms implied by the term 'chronic alcoholism' in its usual sense. To study the action of the alkaloid in acute alcoholic intoxication, the author made six experiments on three abstainers (himself and two young men). The drug was administered always at the same time (*a*) under the skin in a dose varying from five to ten milligrammes, once a day, for three or four successive days, with intervals of from two to seven days ; and (*b*) internally, after the following formula :

℞ Tinct. nucis vomicæ 5·0,
Tinct. Ferri Sesquichlor. æther. 30·0.
M.D.S. To take 15 drops three times daily.

The results are summarised as follows : 1. In acute intoxication, strychnine is completely inactive. A series of preliminary experiments showed that alcohol (a 40 per cent. one), taken on empty stomach in the dose of 100 grammes, induced in the persons experimented upon only a period of excitement without any subsequent period of depression, while 200 grammes gave rise to excitement with subsequent depression of varying intensity in each individual case. Exactly the same symptoms, with the same individual intensity, were observed also when strychnine, in the dose of 5 and 10 milligrammes, had been injected under the skin immediately after taking alcohol. 2. In ten out of eleven alcoholic patients, after three or four injections of the drug, there appeared an aversion to *vodka* (aqua vitæ). 3. Strychnine is the most effective remedy for dipsomania, but the treatment must be repeated in course of time. 4. The alkaloid is also a very good remedy for chronic alcoholism, when it is accompanied with such symptoms as neuralgic pains in the lumbar region and calf of the leg, tabetic gait, trembling of hands, &c. A hypnotic effect of the drug is also very pronounced. The patient's liver remains enlarged as before the treatment. 5. As to cases of alcoholism unaccompanied by any symptoms, the remedial value of strychnine is but slight. 6. As far as alcoholists are concerned, strychnine does not possess any cumulative action. 7. 'It is not impossible that in the treatment of alcoholists by injections the latter also act in a psychical way.'

V. IDELSON, M.D.

233. *Potter on a Peculiar Effect of Cocaine.*—Dr. F. H. Potter reports the case of a woman, aged 24, who had naso-pharyngeal follicular disease, and in whom cocaine was used in 2 and 4 per cent. strength, at first, to overcome her fear of the instruments, and then in the various stages of the treatment, especially when using the chromic acid. Almost immediately upon each application—always within one or two minutes—she experienced a strong desire to defæcate. Sometimes she could not resist this, and it always appeared upon the use of the drug, and varied in intensity with the amount used and the solution strength. It would be slight, easily controlled, or strong and utterly beyond her control, according to the freedom with which cocaine was applied. Other remedies, alone or in combination, applied in the same way with the same instruments, and with the intent to deceive, failed to produce the desire. When cocaine, however, was incorporated with these solutions, the phenomenon appeared. Cocaine has been previously observed to produce intestinal anæsthesia.

234. *Shoemaker on Collinsonia Canadensis ('Stoneroot' or 'Knobroot').*—According to Dr. J. V. Shoemaker this is especially valuable as a sedative and anti-spasmodic. It is astringent and tonic. The popular belief in its efficacy in promoting the expulsion of urinary calculi is well founded. It relaxes the spasm of the ureters or of the urethra, and, by increasing the flow of urine and by lessening the sensitiveness of the genito-urinary membrane, facilitates the expulsion of small concretions. When they are of large size, collinsonia is powerless to either dissolve or expel them ; but it will alleviate the sufferings of the patient by diminishing the irritability of the bladder and urinary canal. Acute cystitis is quickly relieved by collinsonia combined with aconite and morphia. Incontinence of urine in children, due to spasmodic bladder contraction, is permanently relieved by it. In chronic gonorrhœa, leucorrhœa, and prostatorrhœa, it is of value. In rectal neuralgia, spasm of the sphincter ani and vagina, suppositories containing 40 to 90 grains of the powdered root give excellent results. For colic spasms the tincture is the best way of administration in frequently repeated doses of one or two drachms for adults. Dysmenorrhœa has yielded to its exhibition when taken for a week before the usual period. It is of value in moderate doses as a mild general tonic. It increases the appetite, promotes digestion, and gently stimulates all the organs of excretion. It may be given with decided benefit in anæmia, chlorosis, incipient phthisis, and convalescence from the various eruptive fevers. Externally, it constitutes an excellent application to contused and incised wounds. Indolent ulcers may be stimulated to healthy action by an ointment consisting of one drachm of powdered collinsonia and one ounce of fresh lard. Ascarides may be effectually destroyed by rectal injection composed of the fluid extract diluted in four parts of water.

PROFESSOR POEL, of St. Petersburg, records an instance of cod-liver oil adulterated with 50 per cent. of petroleum oil. The appearance and odour of the liquid aroused no suspicion. The adulteration was only discovered by the odour of the gases emitted by the patient by regurgitation.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

235. Himmelfarb, Dr. G.—On the Causation of Hæmatoma Vulvæ in Non-puerperal Cases. (*Centralbl. für Gyn.*, No. 9, 1888.)

236. Wile, Dr. W. C.—Scirrhus of the Mammæ. Illustrated by Twenty-five Cases. (*New England Med. Monthly*, Feb. 15, 1888.)

237. Taft and Gaillard Thomas.—Report of a Case of Tubal Pregnancy advancing to Full Term without Rupture. (*Medical Record* (New York), Feb. 25, 1888.)

238. Kelly, Dr. Howard A.—Removal of the Uterine Appendages for Disease in which Pain is a Prominent Sympton. *Med. News* (*Philadelphia*), Jan. 14, 1888.

239. Poullet, Dr.—On the Active Intra-uterine Treatment of Metritis, Parametritis, and Uterine Displacements. (*Lyon Médical*, Février 19, 1888.)

240. Norment, R. B., M.D. — Sänger-Cæsarean Operation Necessitated by a Peculiar Cause and Accompanied by Unusual Complication. (*Medical News*, Philadelphia, Feb. 11, 1888.)

241. Landau, Dr.—On Cancer of the Uterus. (*Deutsche med. Zeitung*, No. 13, 1888.)

242. Terillon, M.—Nine Operations for Removal of the Ovaries and Fallopian Tubes for Uterine Hæmorrhage. (*Bull. Méd.*, Feb. 29, 1888.)

243. Jaccoud.—On Disease of the Heart and Pregnancy. (*Revue de Thérapeutique*, February 1.)

244. Polotebnoff, Dr. S. M.—A Case of Removal of Ovarian Cyst in a Girl, aged 9, by Laparotomy: Recovery. (*Ejenedelnaia Klin. Gaz.*, No. 12, 1887, p. 209.)

245. Butler.—On a Remarkable Case of Vicarious Menstruation. (*Medical Press*, February 1888, p. 135.)

246. Hunt.—On the Normal Course of Puerperal Temperature. (*Practitioner*, February 1888, p. 81.)

247. Humphreys.—On a Case of Acute Hydrops Amnii. (*Lancet*, February 1888, p. 368.)

Art. 235. *Himmelfarb on Hæmatoma Vulvæ in Non-puerperal Cases.*—Dr. Himmelfarb, of Odessa, recently observed a hæmatoma occupying the entire labium majus, and as large 'as a man's fist,' the result of a bite. The patient was a peasantess, 35 years old. The swelling diminished after rest and cold applications, then Dr. Himmelfarb laid it open, removed a handful of clot, washed out the cavity, stuffed it with iodoform gauze, and applied a compress. The dressings were changed, at first daily, later on every second or third day. At the end of three weeks the wound healed. This appears to be the first case where a hæmatoma in a woman not pregnant or lying-in has attained a large size. Hildebrandt states (*Die Krankh. der äusseren weibl. Genitalien*, 1887, p. 55) that in non-puerperal cases a hæmatoma never exceeds 'the size of an apple,' and, owing to the greater density and resistance of the subcutaneous and subfascial connective tissue, it forms a tumour much more sharply circumscribed and more spherical than the hæmatoma of childbirth. It is generally produced by a fall astride on a sharp-edged surface, or by a kick. Von Franque observed hæmatoma in an old sterile woman, the result apparently of violent straining at stool. Gempe noted a case in a nurse, aged 20, who was engaged in lifting several heavy patients. A hæmatoma has also been caused from imperfect attempts at defloration. Injuries during orgasm, as happened to be the case in Dr. Himmelfarb's patient, are especially liable to cause hæmorrhage into the congested tissues of the vulva.

236. *Wile on Scirrhus of the Mammary Gland.*—Dr. Wile, of Philadelphia, describes and tabulates twenty-five cases of scirrhus in which he operated. Dr. Wile agrees with Benjamin Bell's principle that even in very advanced stages of cancer it is right to amputate, provided the parts affected can be completely removed. In one bad case where he operated the disease recurred in the wound, and proved fatal in six weeks. He objects to operating on patients over seventy, and in cases where atheromatous degeneration exists. He states that where the skin is not involved it should be saved; for the less the skin is removed the more readily does the wound heal, and the smaller the cicatrix the less likely is recurrence at the original site of the disease. Only one of Dr. Wile's cases died. The patient was seventy-three years of age, and he yielded to her entreaties, operating rapidly, with little loss of blood; nevertheless, she died of shock in three days. He operated in each case with systematic precautions. The part was first scrubbed with soap and water, then washed with ether, and then a stream of one in one thousand solution of bichloride of mercury allowed to play over it. It was then swathed in towels, which had been previously boiled and placed in the same solution for forty-eight hours. All the instruments had been rendered aseptic by prolonged boiling and immersion in strong carbolised solutions. The sponges had been prepared, and the catgut soaked in chromic acid and bichloride solution, or in oil of juniper and bichloride. The operator and assistants practised the same scrupulous care with regard to themselves, scrubbing the hands and washing them in the mercurial solution. Iodoform was freely used in the wound, and the final dressings consisted of half a dozen or more layers of gauze rendered aseptic. After the dressings were applied, if the temperature remained about the normal point, they were not touched for two weeks, when upon removal it was usually found that the wound had united by first intention.

237. *Taft and Gaillard Thomas on Tubal Pregnancy advancing to Full Term without Rupture.*—A woman, aged 34, was admitted into the Woman's Hospital, New York, on Jan. 17, 1888. Her health had always been excellent, and she had been twice normally pregnant. The last confinement was ten years previous to admission. A year and a half before she entered the hospital, symptoms of pregnancy appeared and developed naturally; at the end of nine months milk exuded from the breasts. In February 1887 she flooded for a week, large clotted masses passing away. The abdomen then began to diminish in size; at length feverishness, night-sweats, and rigors set in. Palpation of the abdomen revealed in the median line an even, tense, elastic, and freely movable tumour reaching to the umbilicus, and about the size of a pregnant uterus at six months. To the left and in front, just behind the pubes, and apparently attached to the mass, was a hard body, which was evidently the slightly enlarged uterus. 'Vaginal examination confirmed what external palpation seemed to indicate.' The uterus seemed to move with the tumour, although it was difficult to determine that point. On Jan. 21 Dr. Thomas operated. A tumour with very vascular coats and of a light purple colour was discovered. Anteriorly no adhesions were found. The patient was turned on her right side, and a small trocar and cannula inserted into the sac, when, on removing

the trocar, a thick, purulent-looking fluid escaped. The operator incised the tumour, seized the edges of the sac with cyst-forceps and large hooks, and, enlarging the opening, introduced his hand and extracted a full-grown child about seventeen inches long, and somewhat macerated. The lower surface of the sac was quite adherent, and it was not thought advisable to attempt its removal, and, on account of the danger from hæmorrhage, it was determined to leave the placenta *in situ*. Further examination of the sac showed it to be covered everywhere with peritoneum, its wall to be a quarter to half an inch thick, to contain muscular layers, and to be intimately connected with the right horn of the uterus. The sac, in other words, seemed to be without doubt an enormously distended Fallopian tube. The body of the uterus was apparently perfectly developed, there being no evidence of any bifurcation. The patient was so very weak that Dr. Thomas determined to sew the edges of the sac into the abdominal wall, and allow the placenta to slough away, instead of removing the sac. On trimming off the edges of the sac there was considerable hæmorrhage from the very vascular walls, but this was readily checked by a continuous catgut suture uniting them to the peritoneum and abdominal walls. A few interrupted sutures of silk were afterwards added to strengthen the line of union. The sac was next thoroughly washed out with a solution of corrosive sublimate, 1 to 5,000, and strong carbolic acid applied to the edges of the wound. A dressing of iodoform gauze was packed into the sac about the placenta, and covered with a thick layer of absorbent cotton and bandage. On two occasions in the course of the operation the patient became so exhausted that a fatal issue seemed imminent. Had the sac been removed the patient would surely have died, in Dr. Thomas's opinion. On recovering from the anæsthetic, the patient's pulse became very weak, and her breathing shallow; but by vigorous stimulation and elevation of the extremities, after a period of two or three hours, she rallied. Little nausea followed the operation. On examining the wound at this time for hæmorrhage, it was noticed that the sac had contracted more than one-half. For the first twenty-four hours continuous antiseptic irrigation of the sac was kept up, and after this, until the removal of the placenta on the ninth day, washing out of the sac was performed every two hours. Until the eighth day the temperature did not rise much above 100° F., and the pulse averaged 80 to 100 per minute. By this time considerable sloughing was going on in the sac, and Dr. Thomas removed, with the placental forceps, the greater portion of the after-birth, which was quite friable. No hæmorrhage took place. Since then the patient has done uninterruptedly well, and has now entirely recovered. Dr. Taft has found records of eleven other cases where tubal pregnancy has reached the eighth month without rupture. Dr. Thomas has operated five times (this case included) for extra-uterine pregnancy beyond term, and all the patients recovered. [The relations of an extra-uterine fœtal cyst are exceedingly difficult to determine in the later stages of pregnancy. Hence we must accept with caution the records of unruptured tubal cysts at the eighth month; in some of the eleven cases the sac must have been partly tubal, partly abdominal, the tube having ruptured, early in pregnancy, without a fatal result.—*Rep.*]

238. *Kelly on Removal of the Uterine Appendages in Painful Local Conditions.*—Dr. Kelly, of Philadelphia, in considering those cases which are suitable for operation, confines his attention to a group of mixed pelvic diseases where there is no large tumour but more or less marked suffering. Under this group he includes ovaries enlarged by cirrhosis, ovaries with extensive follicular degeneration, hæmorrhagic ovaries, ovaries containing pus-sacs, neuralgic ovaries, 'ovaries involved in a withering of the pelvic peritoneum with the tubes,' and tubo-ovarian disease. Dr. Kelly lays less stress on tubal than on ovarian inflammatory conditions, considering that the tube is secondarily affected, especially when there is suppuration. Pain in itself should never be considered as a sufficient indication for operation; many cases of 'neuralgic ovaries' may be cured by the neurologist: this principle must be especially observed in those cases where the patient concentrates all her mind on the expectancy of pain at every coming period. Varicose veins in the broad ligament cause pain, but removal of the appendages gives no relief, and Dr. Kelly proposes to tie the tortuous veins at each end of their course through the broad ligament, aspirating them if necessary. There remain, however, in Dr. Kelly's opinion, many instances of painful disease of small ovaries where removal of the appendages alone affords any prospect of cure. 'It is impossible, however,' he states, 'for any but a specialist to distinguish with certainty between those cases in which there are no manifest gross changes in these organs, and the cases about to be described, in which the trained touch can with certainty and exactitude determine the nature and extent of such changes. I know by my own progress in this matter how impossible it is for anything but the touch, which is daily exercising, improving, and correcting its inferences, to come to any definite conclusions in this matter, as to the size and position of the ovary and tube, whether cystic, how much enlarged, and if adherent; all these and other questions are but matters of daily practice for years to decide in all cases.' Dr. Kelly makes the following summary:—'Briefly then, as to the status of this operation—the removal of diseased appendages, small in size, but in which pain is a prominent symptom—as a scientific operation. 1. It is scientific, because it deals with diseased organs. 2. It does more than almost any other single surgical procedure in relieving a large number of cases whose sufferings have been almost unbearable. 3. In properly selected cases the percentage of recoveries is over 95 per cent., and improving, and the percentage of cures equally large. 4. Unless we adopt the yardstick as our measure of disease, the indications for operative interference are often more urgent than in the case of most cystomata coming under our observation. And lastly, all the steps of the operation, the technique of the procedure, have now been so widely appreciated, that it may be described as a safe operation.' [Dr. Kelly's observations are of high interest, yet his conclusions are hardly satisfactory, as he implies that he is teaching that certain things cannot be taught, but should be left to specialists, and the pathological part of his paper is vague. Terms like 'properly selected cases' cannot guide any gynæcologist. We have yet much to learn about chronic diseases of the uterine appendages.—*Rep.*]

239. *Poullet on the Intra-uterine Treatment of Metritis, Flexions, and Pelvic Inflammation.*—Dr. Poullet of Lyons believes that expectant treatment

is perfectly useless in most of these diseases. Active proceedings, which involve dilatation of the cervical canal, are not dangerous when thorough. The uterus readily absorbs poisonous germs, including those which naturally exist in the secretions of the endometrium, so that the grazing of its surface by a sound may cause serious complications. Accidents of this kind will not occur if the uterine cavity be washed out with a sublimate solution, or a cubic centimètre of creasoted glycerine, a good germicide, may be introduced. In cases of chronic endometritis Schröder and others have for many years been accustomed to dilate the os, scrape the uterine cavity, and disinfect; but the same authorities lay down a rule that scraping and dilatation should never be undertaken when there is evidence of parametritis or perimetritis. Dr. Poullet is of a contrary opinion. Not only are dilatation and scraping safe and valuable in parenchymatous metritis, but they are necessary, in his opinion, when the inflammatory processes have extended to the pelvic peritoneum and connective tissue. Particularly is treatment of this kind needed when the uterus is retroflexed or retroverted, and its fundus fixed by adhesions or by thick inflammatory deposit. From April 1, 1887, to February 1, 1888, Dr. Poullet has treated fifty-one cases of metritis or parametritis. Under anæsthesia, the uterine cavity was mopped out, the endometrium scraped, and the uterus restored, when displaced, to its normal position. In one case the temperature rose to 102°·2, in none of the others did it exceed 100°·2. All recovered. In cases of pelvic abscess, especially the acute form following parturition or abortion, Dr. Poullet is particularly careful to wash out the uterine cavity with sublimate, injecting half a drachm of creasoted glycerine, to dilate by introducing Hegar's bougies, to scrape the endometrium, and lastly, to swab the cavity with the same preparation of glycerine, before opening the abscess through the vaginal walls. [In all these cases the element of prolonged rest should be taken into account. It is clear that if the uterine cavity be interfered with, precautions must be taken lest any septic material gain admission into the uterine tissues through abrasions and lacerations, such as must necessarily be produced by dilatation and scraping.—*Rep.*]

240. *Norment on the Cæsarean Section in a Case of Extreme Angular Curvature, Lumbar Sinuses, and Renal Disease: the Child Saved.*—Dr. Norment, of Hampden, Maryland, was called in on Dec. 16, 1887, to a single woman, aged 26, who was eight months pregnant. She had angular curvature, and when standing 'the ensiform cartilage and pubes were nearly on a level.' She was 49 inches high, and very thin. There was marked kyphosis involving the entire dorsal region. The lower ribs were in the upper pelvis. The uterus hung pendulous over the pubes, the symphysis lay a little posterior to the femora, when the patient stood on her feet. The vulvar opening looked slightly backwards. There was marked contraction at the outlet, the distance between the coccyx and pubes being about two inches, but Dr. Norment failed to discover any contraction in the inlet. 'The ensiform cartilage was much too near the pubes, the distance between the two being estimated at 6 to 6½ inches (in reality it was something less; measurement after delivery showing it to be but 5¾ inches).' The difficulties in the way of natural delivery or craniotomy were evident. The lower extremities were œdematous, the urine was highly albuminous and contained abundant hyaline and fatty casts. There were two old discharging sinuses in the lumbar region, one opening below the left ilium, the other tracking far and opening on the right thigh. The patient had a hacking cough and bad headache. On Jan. 13 labour pains set in. Dr. Norment operated as soon as he had collected his assistants. The pubes was shaved, the abdomen washed thoroughly with soap and water, and covered with a towel, wet with a 1 in 2000 solution of corrosive sublimate. The sinus under the iliac spine was washed out with the solution, and plugged with absorbent cotton, and a fold of linen wrung from the solution was placed in the groin. The sinus in the thigh was treated in the same manner, except that it was covered with a piece of India-rubber plaster. The bladder and rectum were emptied, and the vagina washed out with a 2 per cent. solution of carbolic acid. The operation was performed on Sänger's principles. The uterus, by its own weight, protruded through the abdominal incision, and lay on a disinfected towel between the patient's thighs. The membranes were still intact, and, on Charpentier's principle, were left intact to the last moment, not on account of any advantage to be derived from such a course in an ordinary case, but from the fact that the patient would have had to be turned on her side in order to reach the membranes through the vagina, on Sänger's principle. It was difficult to raise the uterus enough to incise conveniently the anterior wall. Dr. Norment was unable to discern the position of the placenta, and the incision was immediately over it. The unruptured state of the membranes at this time was a somewhat remarkable circumstance. The cavity of the uterus was full, when the organ was incised, and it failed to contract on the placenta, as the lips of the wound retracted, so that the placental attachments were broken up to a large extent. The placenta was quickly separated from the left side of the incision, the membranes ruptured, and the child seized by the feet and extracted in an asphyxiated condition. While an assistant held the rubber cord controlling hæmorrhage from the uterus, and the operator was emptying that organ by massage, bringing about firm contraction, two other assistants succeeded in resuscitating the child. The uterine wound was closed with two rows of stitches, the peritoneal layer with the continuous suture, and the muscular wall with fourteen interrupted sutures; all were of carbolised silk. The uterus, firmly contracted and free from any leakage, was returned to the abdominal cavity, and the abdominal incision closed. Two hours and a quarter were consumed between the placing of the patient on the table, and her return to her bed, with the wounds fully dressed, and her body cleansed. Chloroform was used as the anæsthetic, on account of the cough. The patient was placed in bed, surrounded with bottles of hot water, and a few minims of Squibb's fluid extract of ergot, along with some whisky, were administered hypodermically. After complete recovery from the anæsthetic, small doses of opium and ergot were ordered. The secretion of urine after the operation was very scanty, anæmia set in, and the patient died sixty-two hours after the operation. The child was living and well early in February. Dr. Norment, in conclusion, observed that he did not consider craniotomy or cephalotripsy in a case of this kind to be safe. Charpentier speaks of thirty-seven maternal deaths in 119 cephalotripsies (minimum conjugate, 2·7 inches) as 'fairly satisfac-

tory results'; probably Dr. Norment's patient was in as unfavourable a condition as the worst of the thirty-seven. Dr. Norment dreaded the chance of failing in one of the destructive operations, and then being compelled to perform Cæsarean section. He had very slender hopes of saving the mother, and operated early. At least the child's life was not sacrificed. ALBAN DORAN.

241. *Landau on Cancer of the Uterus.*—At a meeting of the Berlin Medical Association Dr. Landau described briefly eight cases, seven of cancroid of the portio vaginalis and one of sarcoma of the corpus uteri. The fact that four of the women were aged between 20 and 29 years proves that the disease of the portio vaginalis stands in no relation to age. Only one woman did not survive the operation, and two subsequently had a relapse and died—the one eighteen months and the other six months after the operation. The remaining five have hitherto had no relapse. As to the treatment of cancroid, the question lies between total extirpation and Schroeder's method of supravaginal extirpation of the portio vaginalis. Landau pronounces in favour of early total extirpation, not only because menstruation tends to further weaken the organism, but also because he has found that Schroeder's method is seldom suitable; for, as soon as the cancroid has descended towards the cervix, the moment for total extirpation of the corpus uteri has arrived. Abel, Landau's assistant, has made the discovery that in three cases of carcinoma of the portio vaginalis there was sarcomatous degeneration of the mucous membrane of the corpus uteri—a fact of importance, not only for the operation of portio cancer, but also in respect to the relation between sarcoma and carcinoma generally. Laparotomy has been generally abandoned as the first step to extirpation of the uterus, as being immediately dangerous to life and nearly always involving a relapse: hence Billroth's method of extirpation *per vaginam* was welcomed, by which the uterus was separated from its connections with the knife and the scissors, ligation and suture being used on its entire removal. But there were three objections to this course: (1) The operation involves considerable hæmorrhage; (2) secondary hæmorrhage is to be feared; (3) the ureters may very easily be injured either by the knife or by the subsequent ligation of the lateral parts; (4) the operation is a very lengthy one, and absolutely impracticable in the many cases in which it is impossible to drag down the uterus. Therefore, the French (Richelot's) method of applying compressors was a decided gain. Here the uterus is separated from the bladder and the rectum, bleeding being at once stopped with the pincette; the finger is pushed to the base of the left and right broad ligaments, applying one or more clamps, and then the uterus is cut off without a ligation. All is done in an incredibly short time, viz., from 15 to 20 minutes. The advantages of this method are: (1) there is the slightest possible hæmorrhage; (2) secondary hæmorrhage is guarded against; (3) the dangers of a long narcosis are avoided; and (4) there is nearly absolute certainty that a ureter will not be interfered with, which was formerly of very common occurrence. The after-treatment is simplicity itself. During the time (48 hours) the pincettes remain attached, and after they have been removed, nothing further is done to the patient. Healing follows without a check. Landau lost but one out of the eight cases, and this one woman got up during the night following the removal of the pincettes to get water. The next day peritonitic symptoms set in, indicating ileus. On the 9th day laparotomy was done, and it was found that the intestine was so sharply inflected as to be impermeable. The diagnosis of the initial stage of carcinoma is particularly difficult in the uterus, on account of the many complications. The structure of the diseased tissue must be studied from particles obtained by excision and abrasion. But, sometimes, benign affections (*e.g.* erosions) assume the appearance of cancer, so that even fully competent histologists may be deceived. Dr. Küster at the same meeting stated that he had done the operation, as described by Landau, in two cases, and had at first been charmed with its rapidity. But though he let the pincettes remain only twenty hours, which he considers ample, gangrene attacked the tissue held by the pincettes, and it was a long time before it could be got rid of. The thought of gangrene in the immediate neighbourhood of the peritoneum was anything but assuring. In his second case something worse happened. The operation had been rather more difficult, but the pincettes were applied, certainly so as not to grasp the intestine. Soon symptoms of slight sepsis appeared and gradually increased. The patient died without a trace of peritonitis, but an intestinal loop near the field of operation had a gangrenous spot. This must have been produced by the heavy mass of iron resting on the intestinal loop for twenty hours. Not knowing how to avoid such a recurrence, Küster has determined to abandon the method, pleasant and easy as it is. Nor can he rely on a diagnosis from examination of particles obtained by abrasion. In doubtful cases he has found digital examination to answer well. The uterus having been split bilaterally, the whole cavity can be perfectly explored. If no carcinoma is found the portio vaginalis is stitched up, and healing follows without a check. Landau replied that he could not understand how sloughing from pressure of the intestine could occur unless there had been already a disease of the intestine; for the intestinal loop suspended by the mesentery is normally quite able to yield to pressure. If, on the other hand, peritonitis had arisen from sepsis, the meteorised intestine would certainly press against the pincettes. Hence Dr. Küster's mishaps must not be laid to the charge of the method.

JOHN ELLIOTT.

242. *Terillon on Nine Operations for Removal of the Ovaries and Fallopian Tubes for Uterine Hæmorrhage.*—In five cases the ovaries and tubes were removed *in toto* for obstinate metrorrhagia due to uterine fibromata. In four the operation was successful in the sense that the hæmorrhage did not return. The fifth succumbed five days after the operation from intestinal obstruction caused by the pressure of the tumour. In four other cases the hæmorrhage was not attributable to fibromata; in two of these the ovaries were diseased, and in two they were healthy. In all these cases the hæmorrhage ceased. M. Terillon pointed out that certain forms of metrorrhagia were governed by the ovaries, and, even in the absence of fibroma, it was justifiable to remove the probable cause, which lay in the ovaries and tubes. With fibromata this procedure was *de rigueur*. ALFRED S. GUBB.

243. *Jaccoud on Disease of the Heart and Pregnancy.*—The *Revue de Thérapeutique* of February 1

publishes a note by Professor Jaccoud on the question whether girls affected with organic lesion of the heart should be allowed to marry. Professor Jaccoud considers, notwithstanding M. Peter's views, that no absolute rule can be laid down. If the valvular lesion has never produced disturbance, then marriage is permissible. If symptoms of asystolia (especially in lesions of the mitral valves) have been observed, then there is considerable risk in marriage. Pregnancy would be very critical, on account of the pulmonary congestion it would cause. W. Vignal.

244. *Polotebnoff on a Successful Case of Ovariotomy in a Girl, aged 9.*—In the *Ejenedelnaia Klin. Gaz.*, No. 12, 1887, p. 209, Dr. S. M. Polotebnoff, house-surgeon (*ordinator*) to Professor A. I. Lebedeff's obstetrical and gynæcological clinic in St. Petersburg, details the very rare case of the daughter of a Russian colonel, aged 9, of average size, build, and nutrition, and dark complexion, who was admitted with headache, occasional abdominal pain, and a steadily increasing abdominal swelling, the symptoms being of about two years' standing. On examination, the greatest circumference of the abdomen (at a level a little above the navel) was found to measure 64 centimètres; the distance between the ensiform cartilage and pubes, 27·5 centimètres; that between the top of the tumour and pubes, 21 centimètres. The external genital parts were normal, but the vagina measured as many as 8 centimètres. The tumour was found to be globular, elastic, non-fluctuating, free from the uterus, and fairly freely movable from side to side, but only very slightly in a vertical direction. An ovarian cyst with a very long pedicle was diagnosed, and ovariotomy performed twenty-two days after the admission. The median incision, carried from the navel downwards, measured 7·5 centimètres. Having punctured the bulging-out tumour with a trocar, and drawn off 1,950 cubic centimètres of fluid, the operator easily extracted the remaining solid portion of the cyst with his hand, introduced into the abdominal cavity, without extending the abdominal wound. The pedicle—which actually proved very long as well as broad, and which was attached somewhere high up behind the new growth—was split into two portions, each of which was ligatured apart and then divided above the ligatures, to be returned into the abdomen. The abdominal incision was closed with ten silk sutures, powdered with iodoform, and covered with a layer of iodoform-gauze and several layers of sublimatised wadding, all being secured by a special, very convenient knitted bandage used in Professor Lebedeff's clinic. Except some passing sickness shortly after the operation, and a slight rise of the temperature (37°·8 C.), the little patient's recovery went on most satisfactorily in all respects. The sutures were removed on the eleventh day, when the wound was found to be united *per primam*. On the twenty-first day the girl was allowed to get up. On the twenty-sixth she left the clinic quite well. The whole new growth (including the fluid) weighed 2,310 grammes; its solid portion alone 400 grammes. On being dissected, the tumour was found to contain a tallow-like matter with short fair hairs, two or three osseous fragments, and several tooth-shaped enamel patches, scattered over the various parts of the dermoid cyst. [There is not a single word said about ovaries. To take the case as it is given, we would say that Dr. Polotebnoff's case may be that of laparotomy for a dermoid cyst of (possibly) a mesenteric origin, and not that of ovariotomy for an ovarian dermoid. Still, we hesitate to alter the title of our report in that sense, since—1, the author himself treats his case as an ovariotomy, beyond any doubt; and 2, Russian reporters—including such specialists as Dr. I. Riasentzeff (in the *Jiurnal Akiusherstva*, &c., May 1887, p. 394)—regard this rare case also as an ovarian one. At all events, an explanation from the author himself would be welcome. Assuming for the present that our doubts are irrelevant, we will agree with Dr. Polotebnoff that his case is decidedly the youngest where ovariotomy has been performed by a Russian surgeon. The next place is occupied by the case of a girl, aged 13, where an enormous cystoma of the right ovary has been successfully removed by Dr. Isäak G. Mandelstamm, of Odessa (the *Odessa Town Hospital's Reports for* 1885). The case was conducted under all antiseptic precautions. The pedicle was ligatured and returned into the abdomen. The temperature oscillated between 38° and 37°·7 C. during the first two days after the operation, to become subsequently quite normal. The sutures were removed on the twelfth day, the wound healing *per primam*. The patient got up on the fifteenth day, and was discharged in excellent health on the thirty-second. According to Dr. V. A. Matvëëff's excellent monograph (*St. Petersburg Inaugural Dissertation*, 'On complete Ovariotomy in Russia,' 1886), Dr. Mandelstamm's case was the youngest amidst 762 cases of Russian ovariotomies, operated upon up to April 1886. Two other cases of Matvëëff's collection referred to the girls of 14, and three to those of 15. How rare, indeed, are cases of ovariotomy in childhood, one can see from the fact that Dr. Polotebnoff was able to gather only nine instances of the kind in the whole international literature—viz., those of B. Barker (two in girls of 7), Spencer Wells (of 8), H. Schwartz (of 4), Knowsley Thornton (of 7), Roemer (of 1 year 8 months), Alcott (of 3 years), Busch (of 2), Kidd (of 3). In the London Medical Record, June 1887, p. 247, Mr. Alban Doran adduces, besides, Neville's case (of 2 years 11 months), Cupples's (of 8 years), and Chenoweths's (of 8).—*Rep.*] V. Idelson, M.D.

245. *Butler on a Remarkable Case of Vicarious Menstruation.*—In the *Med. Press*, February 1888, p. 135, Mr. Butler records the case of a married lady, aged 38, of somewhat intemperate habits, who consulted him on account of a skin-eruption. She had been married eleven years and had five children; she had not menstruated for over nine months, but at each period when the normal flow should have commenced, after suffering for a couple of days from a general feeling of malaise, she was attacked with what she called a skin-disease, affecting particularly the anterior aspect of the trunk and upper extremities; she also had considerable hæmorrhage from the nose and throat. On examining her night-dress the author found it marked with spots of blood, some the size of a florin. At first sight the skin presented very much the appearance observed in cases of chronic prurigo, and from some of the vesicles a brown fluid was exuding, which was considerable in quantity. This state of things continued usually from five to seven days, with occasional bleeding from the mucous membrane of nose, and throat. At the end of four or five days the eruption disappeared until the next period was due. The treatment adopted was a drachm of

Aletris cordial, with ten grains of bromide of potash, with fifteen minims of tinct. digitalis, three times a day. After a few days she came back to the author with a joyful countenance, that her menses had returned regularly, and that the skin-eruption had entirely disappeared.

246. *Hunt on the Normal Course of Puerperal Temperature.*—In the *Practitioner*, February 1888, p. 81, is published Dr. Hunt's report of a committee appointed by the Æsculapian Society to inquire into the normal course of puerperal temperatures. The question is divided into five headings, to correspond to the observations published by Dr. Tait in the *Transactions of the Obstetrical Society*, vol. xxvi. Dr. Hunt bases his report on seventy-five cases taken consecutively, in which the temperature was taken twice a day for the first week. Cases with complications such as cellulitis were excluded, but those with perineal tears were accepted. 1. It was shown that in a large majority of cases there was no pyrexia; in 70 per cent. it never exceeded 100° F., in three it rose to between 102° and 103° F., and only in one case did it rise as high as 103°·4 F. 2. If the temperature did rise above normal, it was generally sometime during the first three or four days. 3. With regard to perineal tears, out of the seventy-five cases ten had lacerated perinea, but were only slight cases. In one the temperature was normal throughout, in three it did not rise above 100° F., in three it was between 100° and 101° F., in two between 101° and 102° F., and in one 102°·2 F. 4. With regard to the use of forceps, out of the seventy-five, seven cases are recorded, in none of which was the temperature normal throughout; but it did not exceed 101°·4 F. in any of them. These observations substantiate the conclusions arrived at by Dr. Tait in his paper. Dr. Tait, however, went further into the subject, and found that frequently during the second week there is a rise of temperature due to neurotic or mental causes, and several of Dr. Hunt's cases suffered from a rise of temperature during the first week owing to domestic worries or anxieties about relatives. The conclusions arrived at are summed up as follows:—In a large number of cases labour and the lying-in period are free from any marked fever; but at the same time the whole system, and especially the mental system, is in a state in which it is very ready to receive impressions from without, and that any reflex irritation or any mental excitement causes a rise in the temperature which may be most marked, but which ceases on the removal of the cause.

247. *Humphreys on a Case of Acute Hydrops Amnii.*—In the *Lancet*, February 1888, p. 368, Mr. Humphreys records the case of a lady, aged 39, who was in her ninth pregnancy. She stated that she first felt the fœtal movements on Oct. 5, on the same day that her mother was seized with a fatal stroke of apoplexy. On Oct. 15 she was seen for the first time by the author. The abdomen was then greatly distended with fluid, which had been gradually collecting since the 5th. There was considerable dyspnœa, some palpitation, and a small weak pulse; the abdomen measured twenty-one inches between the superior spines of the ilium, and was very tense. On the 17th she was seen by Dr. Galabin, who agreed in the diagnosis of hydrops amnii, and recognised the presence of twins. The membranes were at once ruptured, nine pints of fluid escaping; the uterus contracted well, and twins were born the following morning. There was only one placenta, there being one chorion and two amnions. There was free direct communication between the veins of the two cords. The half of the placenta which belonged to the second fœtus had several apopleptic clots in it, and the fluid in the unbroken membranes was very dark in colour. RICHARD NEALE, M.D.

DERMATOLOGY.

RECENT PAPERS.

248. LELOIR.—On Leucoplasia Buccalis. (Reference in *Annales de Derm. et de Syph.*, vol. viii., 1887.)

249. HAUSHALTER.—On Polymorphous Erythema. (*Ibid.*)

250. TOMMASOLI.—On the Transmissibility of Psoriasis to the Rabbit. (*Ibid.*)

251. LAURENCE.—On the Treatment of Eczema by Permanganate of Potash. (*Jour. of the American Med. Assoc.*; *Ibid.*)

252. FERRARO.—On the Histological Changes of the Nervous System in Pemphigus Foliaceus. (*Il Morgagni*, 1886; *Ibid.*)

253. SCHWENINGER.—On Herpes and Herpes Zoster. (*Contributions from the Dermatological Clinique of the Charity Hospital in Berlin*; *Monatsh. für prakt. Derm.*, No. 1, 1888.)

254. BAUR.—On the Anatomy of Acute Pemphigus. (*Ibid.*)

255. LÖWE.—On the Anatomy of Psoriasis. (*Ibid.*)

256. DEMATEIS.—On the Etiology of Psoriasis. (*Report of the Congress of Italian Physicians at Pavia*; *Ibid.*, No. 2.)

257. NIZZO.—On Lupus Erythematosus. (*Ibid.*)

258. SPITZ.—On Dermatitis Produced by Treatment with Antipyrin. (*Therap. Monatsh.*, No. 9, 1887; *Ibid.*, No. 21, 1887.)

259. DAEHNHARDT.—On Chronic Pemphigus. (*Deutsche med. Wochensch.*, No. 32, 1887; *Ibid.*, No. 19, 1887.)

260. BROCQ.—On the Treatment of Keloid by Electrolysis. (Reported in *Monatsh. für prakt. Derm.*, No. 20, 1887.)

261. LEBRUN.—On Vitiligo of Nervous Origin. (*Thèse de Lille*, 1886; *Ibid.*, No. 21.)

262. CAMPANA.—On Sarcoma of the Skin. (*Report of the Congress of Italian Physicians at Pavia*; *Ibid.*, No. 1, 1888.)

263. ROHÉ.—On Hirsuties. (*Monatsh. für prakt. Derm.*, No. 1, 1888.)

264. BARDUZZI.—On Salol and Iodoform in the Local Treatment of Skin Diseases. (*Report of the Congress of Italian Physicians at Pavia*; *Ibid.*)

265. MIBELLI.—On the Pathology of Alopecia Areata. (*Ibid.*)

266. DE AMICIS.—On the Pustular Eruptions caused by Iodides. (*Ibid.*)

267. PIFFARD.—On Salt in Dermal Therapeutics. (*Jour. of Cut. and Genito-Urin. Dis.*, vol. 5, p. 421.)

268. MORISON.—On Leucopathia Unguium. (*Ibid.*, p. 474.)

269. DUHRING.—On the Diagnosis of Dermatitis Herpetiformis. (*Ibid.*, p. 478.)

270. ELLIOT.—On Erysipeloid. (*Ibid.*, No. 1, 1888.)

271. ELLIOT.—On Acute Circumscribed Œdema. (*Ibid.*)

272. BEHREND.—On Alopecia Areata. (Virchow's *Archiv*, vol. 109.)

273. VVEDENSKY, DR. ALEXËI A.—A Case of Argyria. (*Proceedings of the Russian Syphilographic and Dermatological Society*, vol. i., No. 9, 1887, p. 30.)

274. HARDY, M.—On the Contagiousness of Alopecia. (*Concours Médicals*, Dec. 31, 1887.)

275. Noel, Dr. Jules.—The Therapeutical Applications of Litholeine in Affections of the Skin. (*Gazette Méd. de Paris*, Jan. 21, 1888.)

Art. 248. *Leloir on Leucoplasia Buccalis.*—M. Leloir (reference in *Annales de Derm. et de Syph.*, vol. viii., 1887), as the result of the study of the pathology, anatomy, and pathogenesis of this affection, points out what he considers to be the chief therapeutic introductions in treatment, leucoplasia only appearing to predispose to epithelioma on account of the irritation produced by ulcerations and fissures which occurred in the unyielding superficial epithelioma caused by excessive cornification. It is against this excessive formation of epithelioma that it is necessary to contend in order to avoid the production of fissures. For this purpose salicylic acid gives good results. Fissures once formed, it is important to produce cicatrisation as soon as possible.

249. *Haushalter on Polymorphous Erythema.*—Dr. Haushalter (*Annales de Derm. et de Syph.*, vol. viii., 1887) studied carefully two cases of polymorphous erythema more particularly with a view to determine whether there is a pathogenic microorganism. In these two cases cultivations made from the serum of small vesicles and bullæ which were present, and from the urine of the patients, produced on agar-agar or peptone gelatine colonies which appeared in several days as dull white pellicles. The colonies became visible three or four days after inoculation at a temperature of 15° to 20° C. They did not liquefy the gelatine. The colonies were composed of rounded micrococci usually seen as diplococci or streptococci. Subcutaneous injections made on adults and strong guinea-pigs with these organisms mixed with distilled water had no effect. Two young guinea-pigs six weeks old died ten hours after inoculation, and cultivations made from blood on agar-agar gave rise to colonies composed of the same cocci. Inoculation on the ears of rabbits produced no inflammatory reaction in these animals. From these experiments the author concludes that he was not dealing with one of the common organisms present in pus.

250. *Tommasoli on the Transmissibility of Psoriasis to the Rabbit.*—The author (reference in *Annales de Derm. et de Syph.*, vol. viii., 1887) stimulated by the fact that Lassar had presented to the Society of Medicine, at Berlin, three rabbits on which psoriasis had been produced by friction of scales from the human subject, repeated the experiment in various ways. On the back of a rabbit properly shaven, frictions were made with bloody lymph from a denuded plaque of psoriasis. Incisions were made with the bistoury which had been used in collecting this lymph. Injections were made under the skin and into the peritoneum with lymph or scales mixed with salt solution. Injections into the jugular were made. He has succeeded several times in producing on the animals cutaneous lesions offering the clinical and pathological characters of psoriasis. When the inoculated or injected matters were taken from the affected rabbit, the period of incubation was found to be shorter than when it came from man.

251. *Laurence on the Treatment of Eczema by Permanganate of Potash.*—The author (*Journ. of the American Med. Assoc.*; *Annales de Derm. et de Syph.*, vol. viii., 1887) reports the cure of a case of chronic eczema of the fingers in a woman which had resisted all ordinary remedies, by the daily application of permanganate of potash (2 per cent.). He states that under this treatment the disease disappeared completely in twelve days. Further experiment with the same treatment gave him in every case satisfactory results. (*See* also London Medical Record for June 15, 1887, Art. 7023.)

252. *Ferraro on the Histological Changes of the Nervous System in Pemphigus Foliaceus.*—The author (*Il Morgagni*, 1886; *Annales de Derm. et de Syph.*, vol. viii., 1887) confirms observations which have been previously made regarding the existence of pathological changes in the nervous system in cases of pemphigus foliaceus. He found that they were present in the nerves, in the terminal twigs of the nerves, as well as in the spinal ganglions and in those of the sympathetic. In the cord this alteration is found in the dorsal region, and is localised in the cells of the posterior horns, and consists in a process of atrophy with complete destruction of the cells. The lesions in the nerves are those of the ordinary forms of neuritis; increase in the visible nuclei in the sheath of Schwann; increase in the protoplasm; atrophy in the medullary sheath with disappearance at some points and atrophy of the cylinder. The lesions in the ganglion system are less pronounced, although they exist in many cases. The author considers that the changes begin in the cells of the posterior horns of the cord, and that on these depends the disturbance of nutrition in the skin. The primary cause of these lesions, although little known at present, might, he considers, be attributed to the presence of a parasite.

253. *Schweninger on Herpes and Herpes Zoster.* The author (*Contributions from the Dermatological Clinique of the Charity Hospital in Berlin*; *Monatsh. für prakt. Derm.*, No. 1, 1888) relates two cases. In one the cicatrix of a gunshot wound formed the point of departure of unendurable pains in the course of the sciatic nerve. The case was treated with severe massage, which stretched the wound, and there developed a typical herpes zoster of the posterial femoral cutaneous nerve. The two cases showed, in the course of two years, zoster, which appeared at intervals on arm, neck, chest, abdomen and leg, always on the left side, beginning above and extending downwards.

254. *Baur on the Anatomy of Acute Pemphigus.*—The author (*Contributions from the Dermatological Clinique of the Charity Hospital in Berlin—Monatsh. für prakt. Derm.*, No. 1, 1888) describes a case of acute formation of bullæ, and histological examination showed that separation took place between the granular and horny layers or between the epidermis and the cutis in such a way that the former, with its projections, was found lying free between the naked papillæ. The inflammatory changes in the cutis which are found in eczema were not present.

255. *Löwe on the Anatomy of Psoriasis.*—The author (*Contributions from the Dermatological Clinique of the Charity Hospital in Berlin—Monatsh. für prakt. Derm.*, No. 1, 1888) differs from Robinson and Jamieson regarding the histological changes in psoriasis, which he does not attribute to the growth of the inter-papillary projections, nor does he find the cause, as Neumann does, in growths in the columnar prickly cell epithelium. He agrees with Auspitz in finding the process of cornification at fault, and defines the disease as a proliferation of the *stratum lucidum*.

256. *Demateis on the Etiology of Psoriasis.*—The author (*Report of the Congress of Italian Physicians at Pavia*; *Monatsh. für prakt. Derm.*, No. 2, 1888) cultivated a micrococcus which he found in the scales of psoriasis, and which produced desquamation on the skin of animals, but produced no symptoms in any other part of the organism.

257. *Nizzo on Lupus Erythematosus.*—The author (*Report of the Congress of Italian Physicians at Pavia*; *Monatsh. für prakt. Derm.*, No. 2, 1888) states that histological examination of the tissues in lupus erythematosus showed a considerable development of blood vessels which was at some places almost suggestive of angioma. After treatment with mercurial ointment, with the exception of an increase in the number of capillaries and a slight degree of infiltration, all the other symptoms disappeared.

258. *Spitz on Dermatitis produced by Treatment with Antipyrin.*—A patient suffering from typhoid fever (*Therap. Monatsh.*, No. 9, 1887—*Monatsh. für prakt. Derm.*, No. 21, 1887) had taken, in the course of the week, 9 grammes of antipyrin without any injurious effect. The patient then suddenly became covered over the whole body with a rash resembling the eruption of measles. On the second day the skin resembled somewhat that of scarlatina, while the face and forehead were covered with slight elevations like those of urticaria. The eyelids and lips were greatly œdematous. After three days desquamation took place in the form of large lamellæ leaving the epidermis moist. Thin crusts followed on the skin. In some places large flattened bullæ suddenly formed, and then in places where there were no bullæ light rubbing with the finger brought away membraneous portions of epidermis. The woman suffered severe pain when she attempted to move her limbs, and could not open her eyes. The symptoms increased under the application of powder. The moist places became dry and the patient recovered without further symptoms.

259. *Daehnhardt on Chronic Pemphigus.*—The author (*Deutsche med. Wochensch.*, No. 32, 1887; *Monatsh. für prakt. Derm.*, No. 19, 1887), in a case of chronic pemphigus in an old woman, found diplococci in the contents of the bullæ. Inoculation of a culture-gelatine led to no result, but on agar-agar after four or five days at the summer temperature, pure cultivations of the cocci were obtained. The colonies had a transparent grey-white appearance. Blood taken from the point of the patient's finger showed the presence of similar cocci, although not in such numbers as in the contents of the bullæ. Inoculations on guinea-pigs and rabbits had negative results.

260. *Brocq on the Treatment of Keloid by Electrolysis.*—The author (reported in *Monatsh. für prakt. Derm.*, No. 20, 1887) states that he has successfully diminished keloid tissue by destroying it by electrolysis. The operation is repeated every eight days. The usual arrangements and precautions practised in the destruction of hairs by electrolysis are recommended by Dr. Brocq.

261. *Lebrun on Vitiligo of Nervous Origin.*—The author (*Thèse de Lille*, 1886; *Monatsh. für prakt. Derm.*, No. 21, 1887) reports the case of a girl of 3 years old who suffered from tubercular meningitis, in whom, during the course of the disease, absolutely symmetrical patches of vitiligo appeared on both cheeks. In a patient, who was suffering from tabes, spots of vitiligo appeared in the very beginning of the disease simultaneously with lightning pains.

262. *Campana on Sarcoma of the Skin.*—The author (*Report of the Congress of Italian Physicians at Pavia*; *Monatsh. f. prakt. Derm.*, No. 1, 1888) has examined two cases of primary idiopathic sarcoma, and found that in these cases changes in the skin and a peripheral affection of the nervous system occurred simultaneously. In the first case sarcoma originated in the nerves and in the cutis. In the second case sarcoma of the skin and neurofibroma occurred simultaneously. In the first case the author found atrophic changes in the nails, the skin, and the subcutaneous tissue; obstruction in the blood and lymph vessels; defects of sensation, and sometimes also in power of movement. Sarcomatous tumours were situated, as is nearly always the case, on the extremities, and showed, however, a certain symmetry, and in many cases were in connection with a known peripheral nervous distribution. From these facts Campana draws the conclusion that a tendency to sarcoma, like fibroma, papilloma, and angioma, has a certain dependence on the nervous system and may be considered a neurotic disease. He lays special weight on the fact that in one of the cases multiple neurofibromata were coincident with sarcoma of the skin, and it is now known that these neuro-fibromata develope very slowly, and usually in connection with congenital disturbance of the nervous system. Therefore, in those cases it must be considered that the multiple neuro-fibromata did not occur in consequence of the sarcoma of the skin, but preceded it.

263. *Rohé on Hirsuties.*—Dr. Rohé (*Monatsh. f. prakt. Derm.*, No. 1, 1838) in a paper read at the Washington Congress, in which he records a number of well-known examples of hirsuties, remarks that although he considers that most cases of this affection are inherited, yet there are facts which show that the affection may be acquired. Certain affections of the nervous system and local irritative conditions, as is well-known, can produce hypertrichosis, even in cases where there is no hereditary predisposition. Hirsuties which occurs in the face of insane women may be reckoned, he believes, as a neurotic variety. Examples of hypertrichosis by local irritation are frequent in cases in which the skin has been long stimulated by irritating applications.

264. *Barduzzi on Salol and Iodoform in the Local Treatment of Skin Diseases.*—The author (*Report of the Congress of Italian Physicians at Pavia*; *Monatsh. f. prakt. Derm.*, No. 1, 1888) uses salol and iodoform extensively in the local treatment of skin diseases. His results have been confirmed by Pelizzari, who has also used them freely.

265. *Mibelli on the Pathology of Alopecia Areata.*—The author (*Report of the Congress of Italian Physicians at Pavia*; *Monatsh. f. prakt. Derm.*, No. 1, 1888) extirpated the second cervical ganglion in nine animals, and in seven of these, all of them cats, bald patches appeared which had a great resemblance to those of alopecia areata in man. The baldness appeared from the fifteenth to the thirty-second day after the operation, and was present in the parts supplied by the extirpated ganglion. There was loss of hair over the shoulders and over the extensor surface of some of the toes. After these bald patches had remained unchanged for some time, a new growth of hair took place, and within three months

there was no trace of baldness remaining. In reference to this statement, Pelizzari remarked that cats have a very delicate hair covering, and that the hairs are apt to fall out extensively and very frequently in well-defined patches. He considered, therefore, that these experiments would only have value if they were confirmed by experiments on other animals. Majocchi also remarked on the tendency of the hair in cats to fall out, and stated that not only excision of the spinal ganglion, but other severe lesions of the nervous system were attended by loss of hair in circumscribed patches. He referred to an experiment of Borghierini, who saw alopecia areata appear after removal of the cerebellum. Majocchi ascribes alopecia areata to a special micro-organism.

266. *De Amicis on the Pustular Eruptions caused by Iodides.*—The author (*Report of the Congress of Italian Physicians at Pavia*; *Monatsh. für prakt. Derm.*, No. 1, 1888) confirms the observations made by Duckworth, Ducrey, and the reporter, which show that the seat of these eruptions is not in the glands of the skin, but in the corium and the papillary layer. He showed microscopic sections bearing out these views.

267. *Piffard on Salt in Dermal Therapeutics.*—The author (*Jour. of Cut. and Genito-Urin. Dis.* vol. v., p. 421) states that in the treatment of cutaneous diseases he has found weak brine baths of essential service in not a few cases. In acute moist eczema it is well known that a bath in plain fresh water, with or without soap, usually aggravates the local lesions, due, he believes, to the absorption of water by the exposed malpighian cells. If, however, from half a pound to a pound of salt be added to the bath (twenty-five gallons) these effects will in a great measure be obviated, and the patient will state that his skin feels better after than before the bath. Thorough cleansing of the surface may thus be obtained without the usual inconveniences. In subacute eczema, in psoriasis, in furunculosis, in irritable summer rashes, whether of a papular or pustular character, in urticaria, and in various forms of scrofulosis, and in pustular and ulcerative syphilides, the 5 per cent. bath (ten pounds of salt to twenty-five gallons of water) is to be recommended, not only as a great source of comfort to the patient, but as unquestionably a therapeutic agent of great utility. In prescribing these baths he usually directs that the water be as hot as could be comfortably borne during an immersion of fifteen to twenty minutes.

268. *Morison on Leucopathia Unguium.*—Dr. Morison (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. v., p. 474) read a paper on this disease of the nails at the last meeting of the American Dermatological Association, 1887. He states that the ordinary white spots found on the nails are well known. These are gradually forced to the outer edge of the nail by the growth of new nail behind. The time occupied in this process varies from four to six months. These spots are usually irregular in shape. The following case was described:—A young lady, 20 years of age, in whom these spots presented a uniform appearance, recently came under the observation of the author. Examination of the nails showed white bands, one-sixteenth of an inch in width, extending across the nails from border to border. The nails were perfectly smooth and in other respects normal. The general health was good, and there had been no acute disease within a recent period. These white bands across the nails had been regularly appearing for many months. During the previous summer the lines had disappeared almost entirely. The toe nails were not affected and the hair was not grey. Portions of the nail were subjected to microscopical examination. Sections were made, cutting the lines at right angles. By direct light these lines appeared of a pure white, while the rest of the section was of a dark colour. The application of acetic acid and other agents caused a gradual disappearance of the spaces. Canada balsam also caused their rapid disappearance. It therefore seemed evident that these white spaces lines were due to air spaces in the nails, the disappearance being caused in the one case by the swelling of the adjacent cells induced by the acetic acid, and in the other by the filling of the spaces with the Canada balsam. Microscopical examination of several of the ordinary white spots found on the nails gave similar results.

269. *Duhring on the Diagnosis of Dermatitis Herpetiformis.*—Dr. Duhring (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. v., p. 478) read a paper at the meeting of the American Dermatological Association in 1887 on the diagnosis of dermatitis herpetiformis. He stated that the chief characteristic of the affection is the multiformity of the lesions manifested in the natural evolution of the disease. If a given case remain sufficiently long under observation, multiformity of lesions will sooner or later be noted, and this will repeat itself. Blebs, vesicles, and pustules may appear together or separately. Mixed eruptions are the most common, vesicles predominating. In one attack or another only one kind of lesion may be present. The disease presents clearly-defined characters in distinct elementary lesions, and certain distinctive abortive lesions. Secondary forms of lesions also exist. Pigmentation of a dirty yellow or brownish hue, and variegated, is usually a marked feature in chronic cases. Excoriations from scratching with thickening of the skin usually exist. In no other affection are such varied combinations of lesions met with as in dermatitis herpetiformis. Erythema and vesicles, or vesicles and blebs, or blebs and pustules, frequently exist side by side in close proximity with more or less pigmentation, excoriation, and secondary changes. Itching is usually a most distressing symptom, and is most severe in the vesicular variety. In the pustular form subjective symptoms may be wanting. The disease is extremely chronic, extending over a number of years.

270. *Elliot on Erysipeloid.*—The disease, which has been well described by Mr. Morant Baker and aptly named by him Erythema Serpens, is described by Dr. Elliot (*Jour. of Cutaneous and Genito-Urinary Diseases*, No. 1, 1888) under Rosenbach's name of erysipeloid. In this case the patient was a cook, and the case presented the peculiarity that the affection was not only present on the hands, but occurred also on the ball of the left foot and the dorsum of the great toe and the first and second toe. The symptoms in the foot were the same as those in the hand.

271. *Elliot on Acute Circumscribed Œdema.*—Dr. Elliot (*Jour. of Cutaneous and Genito-Urinary Diseases*, No. 1, 1888) describes a case of this disease in a man aged 33. The attacks were frequent, and were preceded and accompanied by gastric malaise. Every part of his body was liable to be affected. The usual symptoms were present in this case: œdematous swelling, and a sensation

of itching and burning. There was no change in the colour of the skin. After persisting for some hours, or an entire day, or longer, the swelling disappeared as rapidly as it originated. Improvement took place by attention to the *primæ viæ*, and the author refers to a case of Matas, of New Orleans, in which the symptoms occurred periodically every day, and in which a complete cure was effected by large doses of quinine.

272. *Behrend on Alopecia Areata.*—The author (Virchow's *Archiv*, vol. cix.) finds the cause of alopecia areata in the disturbance of the circulation, which he attributes to some morbid condition in the vessels. This would account, he believes, for the sudden development of circumscribed redness and the loosening of the hair on the affected part.

G. THIN, M.D.

273. *Vvedensky on Argyria from Cauterising the Tongue with Nitrate of Silver.*—Dr. Alexëi A. Vvedensky, of St. Petersburg, describes (*Proceedings of the Russian Syphilographic and Dermatological Society*, vol. i. No. 9, 1887, p. 30) a curious case of a monument-maker, aged 52, in whom a dark discoloration of the integuments developed about two years since, after he had been zealously cauterising the circumvallate papillæ of his tongue with solid nitrate of silver every day for about eighteen months. According to the man's narrative, he had been at the time suffering from a bad throat, standing in some connection, as he felt sure, with the said papillæ. He discontinued his self-doctoring immediately after his friends had drawn his attention to the staining, but the latter remained unchanged up to the date. At present his face is stained most intensely—especially in the prominent parts, where the skin is steel-grey, with a dull tint. Losing gradually its intensity, the discoloration involves the neck, upper limbs, and body, the integuments of the back having a bluish hue. The labial and buccal mucous membranes, conjunctivæ, and scleræ are also bluish, while the lingual root and soft palate with its arches have an intense slate colour. The circumvallate papillæ were found to be much disfigured by scars, but otherwise quite normal. The writer adds that he has been able to collect from the international literature only three similar instances of argyriasis caused by applying nitrate of silver to the throat. One of the cases belongs to Duguet, another to Kriesbacher, and a third to Neumann, whose patient cauterised his lingual papillæ for 26 years. [In the *Brit. Med. Jour.*, Oct. 22, 1887, p. 881, Dr. Barclay J. Baron published his case of argyria from swabbing the throat with a silver solution. His note called forth similar communications from Drs. Samuel Wilks and G. Duffey in the *Journal*, Nov. 5, p. 992, and J. Walters, Dec. 3, p. 1209.—*Rep.*]

V. IDELSON, M.D.

274. *Hardy on the Contagiousness of Alopecia.*—M. Hardy maintained the contagiousness of alopecia, as opposed to M. Ollivier's view of its idiopathic origin. He attributed the comparative rarity of epidemics in schools of the present day to the enforcement of the very prophylactic regulations, the repeal of which was urged. He quoted an outbreak of the disease which had occurred in a garrison regiment at Montpellier, and which seemed to point very clearly to the communicability of the disease, seeing that the suppression of the machine which served to crop the hair for everybody led to the disappearance of the disease. Similar outbreaks attributable to the same cause were reported from Amiens and Nancy. It is also spread in the army owing to the fact that when a soldier becomes the subject of alopecia he is discharged, his hat or helmet being handed over to another soldier.

275. *Noel on the Therapeutical Applications of Litholeine in Affections of the Skin.*—Another petroleum product has been isolated by distilling at a particular temperature and pressure, to which the name of 'litholeine' has been given. It is an unctuous liquid of a yellow colour, specific gravity 888, of a neutral reaction, without taste or smell. It is recommended in the treatment of eczema, over which it is asserted to possess a curative power. The parts affected are washed with tepid water, and then thoroughly saturated with litholeine by means of a soft brush. Parts so treated are best left exposed to the air. It is an antiseptic and parasiticide.

ALFRED S. GUBB.

SYPHILOGRAPHY.

RECENT PAPERS.

276. FOURNIER.—On Syphilitic Pseudo-rheumatism of the Secondary Period. (*Gazette des Hôpitaux*, and *Annales de Derm. et de Syph.*, No. 7, 1887.)

277. FOURNIER.—The Diagnosis of Syphilitic and of Tabetic Paralysis of the Third Nerve. (*Bulletin Méd.*, and *Annales de Derm. et de Syph.*, No. 7, 1887.)

278. MAURIAC.—Sclerosis of the Corpora Cavernosa. (*Gazette Hebdomadaire de Méd. et de Chir.*, and *Annales de Derm. et de Syph.*, No. 7, 1887.)

279. MAURIAC.—Syphilitic Fungus of the Testis. (*Bulletin Méd.*, and *Annales de Derm. et de Syph.*, No. 7, 1887.)

280. POTAIN.—Stricture of the Œsophagus of Syphilitic Origin. (*Gazette Méd. de Paris*, and *Annales de Derm. et de Syph.*, No. 7, 1887.)

281. PORTER.—Communicability of Syphilis through the Saliva. (*Brit. Med. Jour.*, Dec. 10, 1887.)

282. CARLETON.—Communicability of Syphilis through the Saliva. (*Ibid.*, Dec. 24, 1887, and Feb. 4, 1888.)

283. SAUNDBY.—Syphilis and Hæmaturia—'The Diagnostic Significance of Hæmaturia.' (*Ibid.*, Dec. 17, 1887.)

284. LUCAS.—Case of Syphilitic Gumma in the Trachea. (*Ibid.*, Dec. 24, 1887.)

285. EVE.—Communication of Tuberculosis by Ritual Circumcision. (*Lancet*, Jan. 28, 1888.)

286. GRIFFITHS.—Rupture of Gumma in the Liver. (*Ibid.*, Feb. 4, 1888.)

ART. 276. *Fournier on Syphilitic Pseudo-rheumatism of the Secondary Period.*—Under this title M. Fournier considers the affections of the joints in secondary syphilis. Formerly these affections were looked on as ordinary rheumatism occurring in syphilitic subjects. M. Fournier, having lately had several cases of the kind in the Hôpital Saint Louis, has studied the subject afresh. He divides the syphilitic affections of joints during the secondary period as follows:—1. Arthralgia, or pain in the joint without appreciable lesion. 2. Subacute arthritis. 3. Hydrarthrosis. *Arthralgia* is the most common of the three, and is seen oftener in women than in men, especially in nervous women, along with headache, disturbed sleep, depression, sense of fatigue, neuralgic pains, and syphilitic fever. The pain in the joints comes on at the very outset of the secondary stage, and is not accompanied by any morbid sensibility of the joint, and there is neither swelling, deformity, red-

ness of the skin, nor synovial effusion. Pain is the sole symptom, and is usually evoked by pressure and by movement, but sometimes by movement only. It is usually increased by rest and relieved by exercise. The special seat of arthralgia is the larger joints—shoulder, knee, elbow, wrist, &c. The duration varies according to the treatment. Under specifics the pain disappears in a few days. Mercury forms the basis of treatment, but the addition of iodide of potassium hastens the cure. *Subacute arthritis* is the rarest form of joint affection in secondary syphilis. The articulation attacked is painful, slightly swollen, and inflamed—in fact, it has exactly the appearance of a joint in subacute rheumatism. Its most usual seat is the knee, and mostly only one knee. *Hydrarthrosis* is more common than the preceding form. It consists simply in effusion into a joint without general disturbance, and attended by little or no pain. Its almost exclusive seat is the knee-joint. As a consequence of this, as well as of the preceding affection, the joint may become the seat of crackling, as in dry arthritis. The analogies of the secondary syphilitic arthropathies to simple rheumatism are so great that some authors look upon them as merely accidental manifestations of common rheumatism in syphilitic subjects. But the following characters distinguish the syphilitic forms. They affect almost exclusively the large joints, and only one or two of these as a rule; they do not shift about from one joint to another like ordinary rheumatism; they do not cause general disturbance; they never affect the heart; they appear in the secondary period of syphilis without any of the usual causes of rheumatism, and they yield in a few days to specific treatment, but not to the remedies for ordinary rheumatism.

277. *Fournier on the Diagnosis of Syphilitic and Tabetic Paralysis of the Third Nerve.*—A syphilitic person has paralysis of the third pair of nerves. What is the nature of the paralysis? does it depend on a peripheral or cerebral syphilitic lesion, or is it a symptom of tabes? The prognosis depends strictly on the diagnosis. If the paralysis is due to tabes the prognosis is grave; if it is due to a syphilitic lesion of the nerve alone the prognosis is much more favourable than in cases where the brain is attacked by syphilis. Paralysis of the third nerve depending on syphilitic cerebral mischief is nearly always preceded or accompanied by other symptoms, such as headache characterised by its persistency, its intensity, and its nocturnal character, giddiness, visual troubles, staggering, partial loss of memory, epileptiform attacks, aphasia, paralysis. If all these symptoms are absent, it may be concluded that the paralysis is due to some lesion of the nerve in its course. An important point is to determine whether paralysis of the third nerve is due to a simple lesion of the nerve or to tabes. Tabetic paralysis is distinguished by its own proper characters and by other concomitant symptoms. In *tabes* the paralyses are nearly always dissociated, and partial. The pupil may be affected alone or with other parts of the ocular apparatus. Most frequently only a small number of muscles are attacked, and usually only one muscle, namely, the internal rectus. In *syphilis* the paralysis is total; it nearly always involves all the branches of the nerve, causing simultaneously ptosis, external strabismus, immobility of the eyeball, and dilatation of the pupil. Incomplete syphilitic paralysis is much more rare. The alteration of the pupil is of less importance than the other phenomena. The cause of these differences is that syphilis affects a locality where the nerve-trunk is fully formed, and tabes a locality where the roots of the nerve are still separate. Another sign is that which is known in connection with the name of Argyll-Robertson, and which may be looked on as almost pathognomonic of tabes. On the other hand, when the paralysis is due to a lesion of the nerve-trunk the pupil is dilated, and is insensible to stimulus of any kind. Another very important diagnostic sign is myosis with paralysis of the muscles. In ordinary paralysis there is mydriasis. The paralysis of tabes is often only temporary. It may last a few months, weeks, days, hours, or even only a few seconds. This rapid disappearance, far from being a favourable sign, is a proof of the tabetic nature of the lesion. Paralysis due to syphilitic lesion of the nerve, on the other hand, is lasting. Still, the persistent nature of the paralysis does not exclude tabes, for that disease may also cause permanent paralysis. Paralysis due to lesion of the nerve hardly ever relapses; that due to tabes is very liable to relapse. Lastly, the paralysis of tabes may get well spontaneously and rapidly, while that of syphilitic origin is only gradually cured by the aid of specific treatment, the complete cure requiring a period of from eight to ten weeks.

278. *Mauriac on Sclerosis of the Corpora Cavernosa.*—Fourteen cases of this affection, reported by M. Mauriac, are divided by him into four groups. The first group includes three cases in which the development of the sclerosis appeared to be spontaneous. The second group contains six cases in which the sclerosis was apparently due to one or more attacks of gonorrhœa. The third group of three cases might possibly be attributed to syphilis, though their syphilitic origin was very problematical. The fourth group comprises two cases which were perhaps attributable to arthritism or to diabetes. Clinical observation shows that the morbid process causes little or no irritation, but in the absence of any *post-mortem* examination its exact point of origin is unknown. The hardness occupies almost exclusively the most superficial portion of the dorsal or lateral surface of the penis; it is situated beneath the fibrous envelope and is for the most part not adherent to it; the deformity of the organ during erection shows that the erectile tissue of the corpora cavernosa is involved. To the touch the indurations are rounded, and form cords or bands with an even or uneven surface, or ovoid plaques of varying thickness. Usually they are multiple and distributed irregularly in the two halves of the organ, but sometimes in one half only. In size, the scleroses vary from that of a pea to that of a plaque which may occupy nearly the whole of the penis. In consistence they are firm, hard, elastic, and sometimes feel like cartilage. The pain caused by the lesions consists in a sensation of constriction or cramp, which is felt during erection only. The most important symptom is the deformity accompanying erection. The deviation of the penis thus produced may vary in degree and in direction, but it is never from above downwards, as in the chordee of gonorrhœa. The penis is diminished in volume at the site of the sclerosis and beyond it, and erectile power is impaired at and between the affected spots. The general health is not affected except by the moral effect of the disability caused by the affection. Gonorrhœa is the principal cause of the disease, but it is not known why it occurs in some

patients and not in others. Syphilis may be excluded from among the etiological factors, for the sclerosis does not present the characters of syphiloma; it does not break down, hardly ever co-exists with syphilitic manifestations on the genital organs, and is absolutely uninfluenced by iodides and mercury. The course of the disease is very uniform; sometimes, however, the scleroses diminish and even disappear, to return later. In other cases they slowly change their position from one part to another; sometimes, also, they change in form, but only very slowly. M. Mauriac's description is founded solely on his own observations; but there are other causes which have been pointed out by various authors, and which are noticed by M. Mauriac in an appendix to his paper. Among these other causes are gout and diabetes, the importance of which have been indicated by Marchal and Calvi, and demonstrated by Verneuil.

279. *Mauriac on Syphilitic Fungus of the Testis.*—The commonest cause of fungus of the testis is gummy sarcocele. There are two varieties of syphilitic fungus—the superficial, which is the result of a subscrotal gumma originating either in the subcutaneous cellular tissue or in the superficial layer of the tunica albuginea; and the deep variety which is almost always due to the softening and evacuation of gummy material developed in the substance of the testis itself beneath the tunica albuginea. Histologically the two varieties are distinguished by the absence of seminiferous tubules from the first kind of fungus, and by their presence in the second. The syphilitic fungus is of benign nature, and must not be confounded with cancer, nor tubercle, nor with the fungus which occurs in certain cases of orchitis and epididymitis, complicated with abscess of the scrotum. The occurrence of fungus is not of unfavourable significance as regards spermatogenesis. Its treatment is that of syphilitic sarcocele, and surgical interference is to be avoided.

280. *Potain on Syphilitic Stricture of the Œsophagus.*—A man, aged 59, came under the care of M. Potain, at the Charité Hospital, on account of difficulty in swallowing, from which he had suffered three or four months. He could only take liquids, and vomited only after certain kinds of food. The œsophageal sound showed the presence of two annular strictures, one opposite the trachea, and the other 5 centimètres lower down. The strictures were hard and resistant, and the passage of the sound did not cause any bleeding. By these characters spasmodic, congenital, and cancerous strictures, as well as compression of the œsophagus by a mediastinal tumour, were eliminated. The age of the patient was altogether against the idea of spasm; and congenital stricture, besides being very rare, is situated at the lower end of the œsophagus and gives rise to premonitory symptoms long before the definitive establishment of the lesion. Fibrous cicatricial stricture is usually consecutive to ulceration produced by very hot liquids or by caustics or foreign bodies; and as there was no history of anything of the kind in this case, M. Potain looked for signs of syphilis. On further examination it was found that the man had paralysis of the right third nerve, and he also said that in the year 1879 he awoke one morning with paralysis of the whole left half of the body, and of the right eye. The hemiplegia had disappeared, but the eye remained as before. He had had a chancre in 1854, followed by mucous patches and eruptions, and for these had been only very incompletely treated. These antecedents, taken together with the information furnished by the œsophageal sound, led to the diagnosis of syphilitic stricture. This, however, is a rare affection; M. Potain mentions only seven recorded cases. Moreover, the mere fact that a patient has had syphilis is not enough to prove that a stricture of the œsophagus is syphilitic. It is necessary to consider its characters and the presence or absence of symptoms which are known to accompany stricture due to other causes. But the diagnosis of the cause is very important, for on this depend both prognosis and treatment. It must be remembered, however, that stricture of the œsophagus is only a secondary consequence of syphilis; it is in fact only the result of the retractile cicatrices, which are left by syphilitic lesions and which are difficult to treat. It was to be hoped that the lesion was still in the stage of gumma, and had not yet completed its evolution. The treatment of such cases should be both mechanical and medical. The latter consists in the administration of iodide and mercury; the former in dilatation of the stricture, or, if this be impossible, in a surgical operation as a last resource.

281. *Porter on the Communicability of Syphilis through the Saliva.*—Surgeon R. Porter, Medical Staff, reports the case of a soldier who was admitted into the station hospital, Dover, in 1886, with two ulcers on the left forearm. A week before admission he had been tattooed at the site of the ulcers by a comrade who had been discharged from hospital about a fortnight previously, where he had been suffering from a well-marked attack of syphilis. The ulcers looked like chancres, and were somewhat crescentic in shape, each being about the diameter of a florin, and were slightly blue in colour from the staining of the Indian ink. The glands in the axilla became enlarged and indurated. Eight weeks after admission a copious specific rash appeared. During the process of tattooing the operator had spat upon the patient's arm and then rubbed it. There was no evidence of any previous primary sore in the patient. The author states that the usual treatment of syphilis was adopted. The eruption soon disappeared, but the ulcers were long in healing.

282. *Carleton on Communicability of Syphilis through the Saliva.*—Dr. Carleton, Medical Staff, states that he had under his care in the station hospital, Glencorse, a case of a soldier exactly similar to that described by Surgeon Porter [see above], except that the tattooing was done on both forearms. On each forearm was a large chancre, about the size of half a crown. The axillary glands on the left side inflamed and suppurated from the primary irritation before there were any local signs. Both soldiers were in hospital together, and the operator had well-marked tertiary symptoms. The patient had never had venereal disease. The operator had spat on the punctured part during the tattooing. The sores were healing kindly under specific treatment. In the *Brit. Med. Jour.*, Feb. 4, 1888, Dr. Carleton further states that the tattooer contracted the primary sore some years ago, and before he became a soldier. When he was admitted to hospital, a few days after the tattooing was performed, he had painful nodes on the frontal bone, a node on the left clavicle, and enlargement of one testicle. There was no lesion of the mouth, but he had a muco-purulent discharge from one nostril, and other symptoms of post-nasal mischief. The other man

had a characteristic copper-coloured rash in patches over his whole body about the time the sores on the forearm had healed.

283. *Saundby on a Case of Syphilis and Hæmaturia.*—A girl, aged 19, was admitted to the hospital complaining of her water being high-coloured and scanty, and of deafness, on March 10, 1887. Three years before she had suffered in the same way. She had been blind from birth; and both corneæ were disorganised and staphylomatous. Her mother was dead, but the patient could not tell the cause of her death. The girl's father and the rest of the family were healthy. She was well nourished, and rather delicate-looking. Thoracic and abdominal physical signs were normal, and there was no œdema. Temp. 98°·6. On the day after admission the urine measured 32 oz., sp. gr. 1022, acid, turbid, with a deposit of red and white blood-corpuscles, urates, and squamous epithelium. There was a thick cloud of albumen on boiling. The hæmaturia persisted for several weeks; but nine days after admission she complained of her throat. The pharynx and tonsils were congested and covered with sticky muco-pus. Two days later a sloughy eroding ulcer, which Dr. Saundby had no doubt was syphilitic, appeared on the soft palate. She said her throat had been sore since the previous August. Acid nitrate of mercury was applied to the ulcer, and a mixture of perchloride of mercury and perchloride of iron prescribed. On April 18 the throat was nearly well, and the blood in the urine was much less. On April 30 the hæmaturia had entirely disappeared, and the girl was discharged cured.

284. *Lucas on a Case of Gumma of the Trachea.*—A middle-aged woman, who had contracted syphilis about eleven years before, began to suffer in August 1886 from severe pain in the trachea. She had dyspnœa from time to time, and a slight cough with occasional expectoration. When she consulted Dr. R. Lucas, of Dalkeith, in the latter part of October, she was losing flesh and feeling weak from the pain and constant irritation in the windpipe. Gentle pressure on the trachea caused excessive pain, and she could hardly bear her clothing to touch the front of the neck. Early in November Dr. Lucas discovered a red tumour below the vocal cords, apparently attached to the anterior wall of the trachea, and occupying almost the entire lumen. The swelling was considered to be syphilitic, and five-grain doses of iodide of potassium and cod-liver oil were prescribed, as well as inhalations of creasote and morphine. There were no other signs of syphilis. After a month of this treatment there was little or no change, except that the pain was less. The patient was then sent to Dr. McBride, who also diagnosed gumma and advised larger doses of iodide. Fifteen, and afterwards twenty, grains were given three times a day. Improvement soon took place, and at the end of January the tumour had disappeared, very slight narrowing of the lumen and whitening of the anterior wall of the trachea corresponding to the first two rings being all that could be seen with the laryngoscope.

285. *Eve on the Communication of Tuberculosis by Ritual Circumcision.*—A Jewish child, aged 5 months, was admitted into the London Hospital on Aug. 23, 1887, with a large, red, globular, fluctuating swelling in each groin. On the under surface of the penis at the side of the frænum was a small superficial sore. The abscesses were opened, and pus containing masses of caseous material came away. The walls of the abscesses were then scraped. In fourteen days the child left the hospital with a sinus in each groin discharging a small amount of pus. Mr. Eve inserted some of the caseous material beneath the skin of the groin of a guinea-pig. The neighbouring glands soon enlarged, and on killing the animal ten weeks afterwards there was general tuberculosis of the lungs, liver, and spleen, the disease having extended from the inguinal glands along the iliac to the lumbar glands. The mother said that the child had been circumcised when eight days old, and that the wound appeared to heal properly. Six weeks afterwards she noticed the swellings in the groins, and it was then observed that the circumcision wound had either not healed or had broken out again. On Nov. 22 the child showed no evidence of tuberculosis; there was a pin-hole opening in the left groin, but the right had healed soundly. The circumciser had died the previous week from consumption. He had not applied his lips to the wound, but had ejected some wine from his mouth over it. The child in January 1888 appeared quite well. The parents were both healthy. Living in the same house was another woman, whose child had been circumcised by the same person in 1886, and abscesses had formed in the groins six or seven weeks afterwards in this case also. The child is now well and strong.

286. *Griffiths on a Case of Rupture of Gumma in the Liver.*—A sailor, aged 20, having got drunk at Patras nineteen days before his admission into the Seamen's Hospital, Greenwich, had been hauled on board his ship by a rope passed round his waist. On recovering from the effects of drink he had acute abdominal pain, with swelling and vomiting. Since that time he had been unable to work, and had had pain, occasional vomiting, constipation, and slight jaundice. On admission, the abdomen was distended, and there was evidence of fluid; there was also slight jaundice, with coated tongue, a feeble pulse of 92, and temperature 97°. The urine was lithatic and bile-stained, but not albuminous. Morphia was injected and brandy given. Next day the abdomen was aspirated, and 6 pints 16 oz. of alkaline, bile-stained fluid were drawn off. He died soon afterwards. *Post mortem*, the liver was large and congested, and on the upper surface of the right lobe, one inch from the anterior margin, was a gumma, the size of a walnut. The capsular covering had given way over the gumma, which showed deep bile-staining and partial disintegration. No other signs of syphilis were found.

ARTHUR COOPER.

THE PARKES MUSEUM.—The following donations to the funds of the Museum have just been received:—Right Hon. Earl Derby, £25; the Leathersellers' Company, £21; Robert Pullar, £10 10*s.*; and also a donation from the officers of the Army Medical Staff, Netley. The Worshipful Company of Grocers have just made a donation of £20 to this Museum to aid in its work of practical teaching and demonstrating Sanitary Science.

PROFESSOR JACCOUD recommends copious diluent draughts, and an exclusive milk diet, for the treatment of gout, and, in cases where there is considerable fever, a small quantity of hydrate of bromal. Preparations composed of colchicine and of salicylate of soda, though constituting excellent anæsthetics, are to be avoided. In patients affected with interstitial nephritis, these substances determine most serious symptoms of poisoning.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

287. RÜTIMEYER, L.—On Hereditary Ataxia. 'Ueber hereditäre Ataxie.' (Virchow's *Archiv*, cx., s. 218.)

288. STINTZING, R.—On Hereditary Ataxia. 'Ueber hereditäre Ataxie.' (*Münchener med. Wochensch.*, 1887, No. 21.)

289. BLOCQ, F.—A Case of Friedreich's Disease. 'Un Cas de Maladie de Friedreich.' (*Arch. de Neurol.*, 1887, Mars.)

290. MASTIN, M.—Two Generations of Hereditary or Congenital Ataxia; a Clinical Contribution. (*Med. News*, 1887, LI., No. 9.)

291. ROSENHEIM. — On Acute Infectious Multiple Neuritis. 'Zur Kentniss der acuten infectiösen multiplen Neuritis.' (*Archiv für Psych., &c.*, xviii., 3, s. 782.)

292. DEJERINE.—A Contribution to the Study of Alcoholic Neuritis (the paralytic and ataxic forms), Rapid Cardiac Action from Neuritis of Vagus. 'Contribution à l'étude de la Nevrite Alcoolique (forme paralytique, forme ataxique), Tachycardie par Nevrite du Pneumogastrique.' (*Arch. de Physiol.*, 1887, p. 249.)

293. PEKELHARING AND WINKLER.—On Beri-Beri. 'Mittelungen über die Beri-Beri.' (*Deutsche med. Wochensch.*, 1888, No. 39.)

294. REMAK, E.—On Neuritic Muscular Atrophy in Tabes Dorsalis. 'Ueber Nevritische Muskel-Atrophie bei Tabes Dorsalis.' (*Berliner klin. Wochensch.*, 1887, No. 26.)

295. EULENBURG, A.—On the Combination of Tabes Dorsalis and Motory Systemic Disease of the Spinal Cord. 'Ueber Combination von Tabes Dorsalis mit motorischer Systemerkrankung des Rückenmarks.' (*Deutsche med. Wochensch.*, 1887, No. 35.)

ART. 287. *Rütimeyer on Hereditary Ataxy.*—A summary of this and the three following papers is given in the *Centralbl. für die med. Wiss.*, 1888, No. 7. The author gives the results of careful *post mortem* examinations of two cases of hereditary ataxy; the clinical course of each of these has been already published. In both cases were found a high degree of degeneration of the posterior nerve-fibres, especially of Goll's columns, and systematic degeneration of the lateral pyramidal and cerebellar fibres, the anterior pyramidal fibres being perfectly intact. In the grey substance there was degeneration of Clarke's columns and their cells. The anterior cornua were normal; in the posterior intact zones were found. The posterior nerve-roots were degenerated. The author concludes from his investigations that hereditary ataxy must be regarded as a 'combined primary systemic affection,' depending on hereditary causes. This disease is differentiated not only clinically but anatomically from classical tabes and other recognised forms of ataxy, and it must be looked upon as an independent disease of the spinal cord.

288. *Stintzing on Hereditary Ataxy.*—After a careful description of the symptoms of Friedreich's disease, the author reports two cases observed by him. Out of seven sisters, with healthy family history, the two youngest presented each a perfect picture of hereditary ataxy; their ages were nineteen and fifteen years respectively. The two oldest, according to the account given by their friends, were affected with the following:—Complete motory and sensory paraplegia of the lower limbs, without muscular atrophy, failure of reflexes, motory paresis and slight ataxia of the upper limbs, nystagmus, disturbances of vision and hearing, and difficulty of speech. The bladder and rectum acted normally. Stintzing is of opinion that the two elder sisters suffered from the same disease as the two younger, but in a more advanced form, the lateral fibres of the cord and the anterior cornua being involved subsequently to the posterior fibres. In all four the disease began at the ninth year of age. Of the remaining three sisters, one died young; a brother who was considered healthy was impotent, and a second brother was pyschically abnormal.

289. *Blocq on a Case of Friedreich's Disease.*—The patient was a man, aged 20, of healthy family, no sisters or brothers. His disease began at the age of ten years with a feeling of fatigue and weakness in the legs. Four years later he could still get about with a support; his gait was like that of a drunkard. Two years afterwards he could no longer stand or walk, and had to keep his bed; there was then ataxy of the upper limbs, also tremulous movements of the head were observed, and the speech was deranged. *Present condition*:—Patient is of weak constitution and boyish appearance; speech is scanning and stuttering; no motor derangements during rest; no muscular atrophy; equino-varus position of both feet; severe ataxy on moving the limbs, especially on the left side, but not increased; closing the eyes; muscular power preserved; the eyes show slight horizontal nystagmus during rest, a greater degree when moved; no sensory derangements; special senses normal, knee reflexes normal; no trophic disturbance; electrical reactions normal. The author considers that this case is distinguished from ordinary cases of Friedreich's by the absence of hereditary influence; neither is it a case of multiple sclerosis, from the absence of several symptoms. He believes that there is a special affection here, occupying a place midway between tabes and multiple sclerosis.

290. *Mastin on Two Generations of Hereditary or Congenital Ataxy; a Clinical Contribution.*—The grandparents of the three youngest patients were cousins, and healthy. Their two sons showed the disease; also the only son of their eldest daughter, and three sons of the second daughter; the female members of the family were unaffected. The disease began in one case in the eighth year, in the rest at the age of 10 to 15 years, its duration averaged 15 years in three fatal cases. The symptoms were alike in each case; no autopsy was made.

291. *Rosenheim on Acute Infectious Multiple Neuritis.*—A well-built man, aged 35, with moderately advanced pulmonary tuberculosis, was suddenly affected with paralytic symptoms in both legs, and after a few days in both arms. Then the muscles governed by the crural and obturator nerves were implicated, together with those of the shoulder, back and chest. The paralysis rapidly became complete, with atrophy and reaction of degeneration. At first there was sensory irritation, later on lowered sensibility. Westphal's sign was lost from the first, the skin-reflexes later; the sphincters remained free. On the fifteenth day of the disease respiratory troubles came on, with a very quick pulse, and death ensued next day. At the autopsy there was found tuberculous disease of the left lung. The brain and spinal cord appeared normal. In the great nerve-trunks, most of which were examined, inflammatory alterations were found, *e.g.* in both

vagi and in both great sciatic nerves, characterised by hyperæmia, hæmorrhage, and nuclear growth. The nerve-fibres themselves participated to a moderate degree by destruction of the sheath of Schwann, and by loss of the axis cylinder. A concentrically arranged connective tissue framework existed in places, without any nerve-fibres, but enclosing a homogeneous round mass. These foci, according to Rosenheim, had nothing to do with the neuritis. The symptoms during life and the *post mortem* signs led the author to imagine a (possibly) infectious origin of the disease, and although microscopical examination gave negative results, the disease is regarded by him as infectious in so far that poisonous products of bacteria in the lungs gave rise to it. The *post mortem* nerve signs were exactly like those described by Oppenheim and Siemerling (*Centralbl.*, 1887, s. 620), although the author makes no reference to this subject.

292. *Dejerine on Alcoholic Neuritis, &c.*—The following summary is from the *Centralbl. für die med. Wiss.*, 1888, No. 1. The author endeavours to show by the two cases reported, that the abuse of alcohol may lead to affections not only of the sensory and motory nerves, but also of such nerves as the vagus, which are not under the direct influence of the will. In all such cases the prognosis is most unfavourable, because when the vagus is affected, death may easily follow from cardiac paralysis. Case 1. A woman, aged 29, a periodical dipsomaniac (hereditarily influenced), presented at first symptoms of ataxy, later on of advanced paresis and atrophy of the limbs on both sides (reaction of degeneration in some of the muscles); the intellect was disturbed moreover, with a tendency towards suicide. The tendon-reflexes were abolished, but the skin-reflexes were retained; the sphincters acted properly; marked sensory disturbances were observed, and 'tachycardie' (rapid cardiac action) persisted for several months. The patient finally recovered. Case 2. A woman, aged 46; all the limbs paralysed and atrophic; no ataxy. Tendon-reflexes lost; considerable sensory disturbances; pupils normal; persistent 'tachycardie'; death from pneumonia. A careful examination (microscopic) of the fresh and hardened organs showed no alterations in the central nervous system, including the roots and nuclei of the vagus; but parenchymatous neuritis of the cutaneous and muscular nerves, also of the vagus, was found present.

293. *Pekelharing and Winkler on Beri-Beri.*—The original paper will be found in the *Deutsche med. Wochensch.*, No. 39, 1887. The authors (*Centralbl. für die med. Wiss.*, No. 3, 1888) studied this disease in Atjeh (Netherland Indies), and came to the conclusion that beri-beri must be regarded as a multiple degenerative neuritis, the clinical symptoms depending on the degree of participation of the motor or vaso-motor nervous systems respectively. The 'nervous-muscular' electrical derangements were the most characteristic, and were never absent. There was not only simply lowered excitability of nerves and muscles for both kinds of current, but also partial and complete degeneration-reaction. The peroneal region is the first to be attacked; the most dangerous lesion is that affecting the vagi and laryngeal nerves. Disease of the sensory nerves causes the most varied subjective and objective disturbances of feeling, which may go on to total anæsthesia. Œdemata and dropsies are so prominent as to occupy the foreground of the clinical picture; albumen is always absent from the urine, at least at first; cardiac palpitation, a frequent pulse, enlarged area of heart-dulness, and dilatation and hypertrophy of both ventricles, especially the right, are the chief symptoms. The most characteristic œdema is that of the face, and that on the tibial crest of each leg. The cutaneous and muscular nerves (including the cardiac and laryngeal nerves) are found in a condition of more or less advanced degeneration, but the upper parts of the nerve-trunks, the anterior and posterior roots, and the spinal cord itself take no share in this. Some changes found in these parts in a few cases are regarded as only secondary.

294. *Remak on Neuritic Muscular Atrophy in Tabes Dorsalis.*—A cigar-worker, aged 39, had, in addition to tabes, a degenerative atrophy of the ball of the right thumb (*Centralbl. für die med. Wiss.*, No. 8, 1888). This was not of spinal origin, as the motory, sensory, and electrical diagnostic signs showed, but depended on peripheral disease of the median nerve. Several cases of the complication of peripheral neuritis with tabes being lately recorded, the author discusses this question, and is of opinion that in the above case this complication was not accidental, but that over-exertion of the diseased muscles (the patient in his work had to continually use the three first fingers in a one-sided manner) caused the development of the neuritic muscular atrophy.

295. *Eulenburg on Tabes Dorsalis Combined with Motory Systemic Disease of the Spinal Cord.*—Of the three cases described by the author (*Centralbl. für die med. Wiss.*, No. 8, 1888), the two first, in which, besides tabes, symptoms of muscular atrophy were present, afford nothing special. The third case is more remarkable, because in addition to atrophic paralysis of certain spinal nerves, there existed multiple cerebral paralyses on both sides, in the regions of the hypoglossal, accessory, and oculo-motor nerves. In this case the symptoms of tabes were less pronounced than those of atrophic paralysis, so that the author is disposed to regard the disease as situated primarily in the anterior coruna, and the cerebral nerve-nuclei, and only secondarily in the posterior fibres of the spinal cord.

E. J. Edwardes, M.D.

REVIEWS.

Article 296.

Lectures on the Surgical Diseases of the Urinary Organs. By Reginald Harrison, F.R.C.S. Third Edition. 1887.

The Lettsomian Lectures on some Points in the Surgery of the Urinary Organs. By Reginald Harrison, F.R.C.S. London: J. & A. Churchill. 1888.

The Lettsomian Lectures form an addendum to the larger and well-known work first mentioned above, and will be read with interest as coming from one who has had a peculiarly large experience and is recognised as a sound and able teacher as well as surgeon.

Referring first to the new edition of the original Lectures, we find the volume a large and handsome one, almost too large for comfort, but it contains considerable additions and has been entirely re-written. Two smaller works, which have been out of print for some time, are incorporated with the

Lectures, and these are 'On the Prevention of Stricture and of Prostatic Obstruction,' and 'Observations on Lithotomy and Lithotrity and the Early Detection of Stone in the Bladder, with the Description of a New Method of Tapping the Bladder.' Altogether forty-five lectures are here given, with as many as a hundred and seventeen illustrations. The language is just what a reader of a clinical lecture finds attractive, as well as forcible and clear, and has made the work a standard one on the subject it treats of. That it is thorough no one will doubt, and the forty-five lectures cover a very large ground, so large that it would be impossible to give any outline in a short notice such as this. There are some points, however, to which we may draw attention, although some of them will be so much identified with the author's name that it may seem unnecessary, and some of them are again noticed in the more recent Lettsomian Lectures.

We are surprised to find that the old notion still prevails anywhere in this country that every venereal disorder, whether simple gonorrhœa or any other form, must be treated by mercury, and that salivation is not rarely the result of the only remedy administered for a gonorrhœal discharge. In the causes of stricture, too, we are inclined to think the author has not condemned in strong enough terms the faulty instrumentation of professional as well as amateur bunglers. It is a question to us whether the metal instruments ought to be put into the hands of novices at all. In the treatment of stricture the author still holds to the view, which many surgeons are strongly opposed to—of the reasonableness of the treatment by forcible dilatation or rupture by means of Holt's dilator. The results of internal urethrotomy do not appear to him satisfactory, and he prefers a tear to an incision where there is a chance of the part being subsequently exposed to the risk of absorbing anything that may induce septic poisoning. He has never seen death follow as a consequence of the operation. But in the treatment of stricture the author's experience of combined internal and external urethrotomy in certain cases is well known to have been most encouraging, and his introduction of the combined method marks a valuable progress in modern surgery. The free drainage for any decomposing urine avoids the serious complication of urinary fever, and puts the patient in almost as good a position as when perineal section is done early in cases of ruptured urethra. Instructive cases of both of these conditions are given, and the suggestive remark is made that rarely do we find a case of stricture actually cured by any operative means.

Toxic urine forms the subject of one of his original lectures, and is again considered in the first of his Lettsomian lectures, and the importance of this is obvious in all operations on the urinary organs.

Among the greatest advances in modern surgery are undoubtedly the operation of litholapaxy and the removal of the tumours of the bladder and general exploration by suprapubic cystotomy. In regard to the former, the author accepts freely the principle of removal of a stone by a single crushing, but adheres apparently to his preference for lithotomy in children. In his third Lettsomian lecture he says :—'Having regard to the great success of lithotomy in male children, I should not feel disposed to extend the crushing operation in this direction materially, except in the case of some small stones. It has, I know, been alleged that lithotomy means emasculation, but I am not aware that sufficient proof of this has been afforded.' But he gives great credit to Dr. Freyer and Dr. Keegan for their successful application of litholapaxy to so large a class of cases. He makes some valuable and suggestive remarks about the two operations in regard to the question of possibility of removing in the case of lithotomy something more than the stone itself—*i.e.* the tendency to reproduction of the calculus by thoroughly draining the faulty viscus until normal urine is secreted and retained. In this way lithotomy possesses in some cases a decided advantage over lithotrity.

With regard to the suprapubic operation he recognises that it will probably become a favourite operation, even for the removal of ordinary calculus, by many surgeons ; inasmuch as it is easier than lithotomy, but he urges that surgeons are at fault in dilating the prostate with the finger. It is unnecessary and dangerous, and may lead in young children especially to injuring the urethra and displacing parts ; and he urges that the perineal operation affords a much better means of drainage than the suprapubic, but allows that for large stones the latter is the best and only reasonable operation. In his lectures he does not restrict the term calculus to any particular size of stone, as has been lately advised by Sir Henry Thompson, and will probably be accepted by most surgeons in future. The suprapubic operation for tumours of the bladder he recognises as of great value in certain cases, but he originally favoured the perineal incision, and he gives a wise caution as to the necessity of selecting suitable cases for operation. Malignant growths had better not be interfered with, but we do not gain here any important assistance in determining what are malignant growths from the symptoms observed. An instructive case is given which tallies to some extent with that referred to by Mr. Pitt, and noticed in this number of the London Medical Recorder. A villous growth was removed from a young man by the perineal operation, and he was temporarily relieved, but a recurrence of the growth occurred, and, after death, the kidney was found extensively diseased.

Mr. Harrison does not, in these lectures, refer to the suggestion he has recently made (*Lancet*, Oct. 29, 1887 and March 10, 1888), of the possibility of washing out the ureters, and even the pelvis of the kidney in certain cases ; but one of the illustrations, showing the dilated ureter and its orifice in the bladder is referred to by him in his recent communication as supporting his views.

It would be impossible to do justice to the large field he covers in these lectures, and we shall only mention that the subject of the remaining Lettsomian lecture, and of as many as seven of his original lectures is the prostate. Its pathology, viewed in respect to the causation and prevention of enlarged prostate, and the treatment and complications arising out of it forms one of the Lettsomian lectures, and the original work contains other subjects relating to diseases of this organ. We congratulate the author upon the production of these works, which will add to his already great reputation as a surgeon and as a teacher. The style of writing is easy, the language clear, and the substance full, and there is no doubt the lectures will be read generally and be generally quoted in works upon this subject. The illustrations add materially to the clearness of the descriptions, and the original authors of these and of views and facts made use of in the lectures, are fully credited with their work, and references are

given in the text to the sources from which assistance is derived—a custom alike useful to the reader, just to the observer, and creditable to the author.

W. W. Wagstaffe.

Article 297.

Handbuch der allgemeinen und specielten Arzenei-Verordnungslehre auf Grundlage der neuesten Pharmacopöien. Bearbeitet von Dr. C. A. Ewald, Professor an der Kgl. Universität in Berlin. Elfte Auflage. Verlag von August Hirschwald. Berlin, 1887. (849 pages.) (Manual of the general and special pharmacopœia.)

This standard work, of which the present is the eleventh edition, has undergone many alterations and improvements since its first publication, more than half a century ago, in 1831 by Dr. Phœbus, who only treated the Prussian and German Pharmacopœias. Professor Posner and Dr. Simon, who became editors in 1853, thoroughly revised and enlarged this work, and incorporated in the following editions the most modern drugs, keeping step with the advance of medical science and modern practice. The same plan was adopted after Professor Posner's death by Professor Waldenburg, who joined Dr. Simon as editor, and who in the following editions also included the preparations of the Austrian and British Pharmacopœias. Both Waldenburg and Simon having died since, Dr. Ewald, Professor of Materia Medica at the University of Berlin, assisted in the technical part of the work by Dr. Dronke, noted by his chemical researches on antiseptic preparations, improved the present (eleventh) edition by many important alterations. A number of obsolete medicines and prescriptions have been omitted to make room for all the new preparations which within the most recent times have been introduced and adopted. Of great value is the incorporation of the foreign Pharmacopœias—viz., the American, Austrian, British, Dutch, French, Italian, Norwegian, and Swiss. The references to the new Italian Pharmacopœia, which had been published whilst this present work was already in print, commence with the word *cuprum* (the drugs being arranged in alphabetical order). To the name of each preparation the terms used in the different countries and Pharmacopœias are added.

Particular attention is drawn to the varying strength of the same preparations in the different Pharmacopœias, and to the different modes of obtaining these; thus, *e.g.*, to mention a very common drug, the syrup of iodide of iron, which is composed according to the—

Phar. Germ. of 5 per cent. iodide of iron—*i.e.* 5 grammes (1 drachm) in 100 grammes (3½ ounces).

Phar. Americ. of 10 per cent. iodide of iron—*i.e.* 5 grammes (1 drachm) in 56 grammes (1 ounce 2 drachms).

Phar. Aust. of 12 per cent. iodide of iron—*i.e.* 5 grammes (1 drachm) in 417 grammes (14 ounces).

Phar. Brit. of 5·7 per cent. of iodide of iron—*i.e.* 5 grammes (1 drachm) in 87 grammes (3 ounces).

Phar Gall. of 0·5 per cent. of iodide of iron—*i.e.* 5 grammes (1 drachm) in 1,000 grammes (3 pounds).

Phar. Helv. of 1 per cent. of iodide of iron—*i.e.* 5 grammes (1 drachm) in 500 grammes (1½ pounds).

Phar. Ital. of 5 per cent. of iodide of iron—*i.e.* 5 grammes (1 drachm) in 100 grammes (3½ ounces).

Phar. Neerl. of 20 per cent. of iodide of iron—*i.e.* 5 grammes (1 drachm) 25 grammes (7 drachms).

Thus the French syrup is only half as strong as the German, and only one-fortieth part as strong as the Dutch.

A German prescription containing extract of aconite, made up in England, will not have the desired effect, while, on the contrary, the English prescription prepared in Germany will likely produce dangerous symptoms, owing to the different ways of obtaining the extract of aconite, which, according to the *German*, *Austrian*, and *Italian Pharmacopœias* is made of the dried tubers with alcohol of respectively 60 per cent., 70 per cent., and 90 per cent.

Phar. Amer. of the dry tubers with 90 per cent. alcohol and 1 per cent. acid, consist. 2.

Phar. Brit. of the fresh herb and flowers, the chlorophyl being retained; consist. 2.

Phar. Gall. of the dry herb with boiling water; consist. 2.

Phar. Helv. of the dry herb with alcohol of 50 per cent.; consist. 1.

Phar. Neerl. of the fresh herb with water (ext. aq.) or alcohol (ext. spirit.); consist. 2.

Now, all the pharmacological investigations agree that the dried tubers are richer in aconitine than the leaves, and that the chlorophyl which separates on heating the fresh leaves is perfectly inactive and devoid of aconitine.

Hundreds of instances of similar discrepancies may be quoted from comparison of the different pharmacopœias.

The work is divided into two parts. The first part, the general pharmacopœia, treats of the weights and measures, and of the forms in which medicines are prescribed, prepared, and employed, arranged under the heads: (1) internal remedies in the stricter sense, *i.e.* introduced into the stomach; (2) those applied to the external surface of the skin; (3) those introduced into the deeper layers of the integument, the subcutaneous cellular tissue and the deeper strata, viz., endermatic applications and subcutaneous injections; (4) applications to mucous membranes, according to the special localities; (5) injections into the veins; and (6) injections into serous cavities and cysts.

The second part contains the special pharmacopœia in an alphabetical arrangement of the preparations, and their employment; to each of which is added a series of prescriptions by the leading medical authorities of every nation.

This is followed by an index of the preparations and by a special therapeutical index, whereby the general usefulness of this manual for the practitioner is greatly enhanced.

The longevity and repeated appearances in so many new editions of this work are the best test of its acknowledged value.

Ferd. Adalb. Junker, M.D.

Article 298.

Transactions of the American Surgical Association. Vol. v. Edited by F. Ewing Mears, M.D. Philadelphia: P. Blakeston, Son, & Co. 1887.

The latest addition to these well-known Transactions presents a welcome and interesting record of the active part that has been taken by representative American surgeons in promoting and advancing the most recent developments of practical surgery. A short Introductory Address by Dr. McGuire, the president, on 'The Need and Value

of Co-operative Work in Surgery,' is followed by nineteen papers, the value of which is enhanced by the publication of the discussion on each. Most of these papers deal with subjects of operative surgery, two being devoted to suprapubic cystotomy, one to spelencetomy (of which a successful instance is reported by Dr. McCann), and two to the treatment of aneurysm. The papers to which most importance is probably to be attached are those relating to abdominal surgery, and especially the operative treatment of gunshot wounds of this region—a subject which surgeons in the United States seem of late to have made particularly their own. Dr. Nancrede's contribution on laparotomy for such injuries will be found a valuable addition to the results of the work that has been done in this field by Dr. Parkes, Dr. Bull, and other colleagues. The large experience in this branch of practical surgery that has been gained by the authors of the papers on abdominal surgery, and the interest of many of the cases here recorded, apart from the merit of most of its contents, claim for this volume the attention of practical surgeons on this side of the Atlantic. W. Johnson Smith.

Article 299.

Illustrations of Clinical Surgery. By Jonathan Hutchinson, F.R.S., LL.D. Fasciculi xx. and xxi. J. & A. Churchill. 1887.

The latest additions to the second volume of Mr. Hutchinson's *Illustrations of Surgery* are certainly not inferior with regard to the interest and instructiveness of the selected cases to former fasciculi, and maintain the value of this work as a record of fruitful clinical research. Fasciculus xx. contains plates illustrative of epithelioma under different conditions of growth, and of surgical disease of the kidney due to the somewhat unusual cause of stone in the bladder. The illustrations of keloid growths given in both fasciculi are of special interest as showing the development of this disease in the very slight and almost imperceptible sur-tissue of blisters and boils. In his comments on the illustrations of keloid, Mr. Hutchinson states that he believes with regard to this disease that a preceding condition of scar is absolutely necessary to its production, and that it always displays, sooner or later, a tendency to involution, and usually disappears entirely. The second of these fasciculi is devoted mainly to various forms of eye-disease, and to certain lesions of inherited syphilis. The illustrative plates vary much in merit, but of the majority, especially those of keloid, epithelioma of scar, and of punctated keratitis and permanent interstitial opacity of the cornea, it may be confidently asserted that they are unsurpassed as representations of surgical disease.

W. Johnson Smith.

Article 300.

Die Diagnose der Blasen- und Nierenkrankheiten mittelst der Harnleiterpincette. (*The Diagnosis of Bladder and Kidney Diseases by means of the Ureter-forceps.*) Von Dr. M. Tuchmann, Arzt am Deutschen Hospital in London. Mit 33 Abbildungen. Berlin: Hirschwald.

This work advocates the diagnosis of possibly unilateral kidney-disease by a mechanical contrivance. An instrument has been constructed by the author which can be made to close one ureter for as long as the surgeon desires, fifteen minutes being sufficient for its purpose. In the meanwhile the urine from the opposite kidney enters the bladder, and flows out along one of the blades of the forceps. In cases of pus or blood in the urine, it can thus be ascertained whether one or both kidneys be diseased, and whether, in cases of bilateral disease where one kidney is evidently disorganised, its fellow is healthy enough to continue its functions. The ureter-forceps resembles a lithotrite, but is much lighter. The blades can be separated to an extent not exceeding half an inch, and are approximated by a delicate spring contrivance, so that they cannot tear or crush the mucous membrane which they are constructed to grasp. The outer blade is hollow, so that the urine from the unclosed ureter can pass through it.

The orifice of each ureter forms a valve, as is well known, owing to the oblique course of the duct through the walls of the bladder. Along that course the ureter stands out in relief under the mucous membrane, forming a bar which Dr. Tuchmann distinguishes by the name of ureteric valve. This valve can easily be felt, seized, and closed. The author also maintains that its position is constant, and that, owing to the anatomical connections of the part of the bladder through which it runs, and that part anterior to the ureteric orifice, the vesical wall cannot be displaced to any appreciable extent by instruments. If, then, the two blades of the ureter-forceps be separated from each other to their utmost extent after the introduction of the instrument, and then slipped along the base of the bladder and carried as far as the posterior wall, the valve may be caught between the blades without any difficulty. The blades being closed, the operator can readily feel assured that he has properly seized the valve. The resistance of the base of the bladder may be felt, and the immobility of the instrument is complete, whilst this is not the case if the vesical mucous membrane be seized at any other point.

Dr. Tuchmann's work is doubtless an essay of some importance, the result of more than fifteen years of research. It is divided into chapters on the diagnosis of diseases of the urinary tract, on the mechanism of the instrument, on the anatomy of the neck of the bladder, and on the application of the ureter-forceps. The diagrams are clear and instructive. Alban Doran.

Article 301.

Œuvres Complètes de Jean Méry. Réunies et publiées par le Dr. L. H. Petit. Paris. Felix Alcan, Editeur. 1888.

This very interesting book contains as complete a collection of the works of Méry as we are ever likely to possess, for the editor has only failed to include some few papers, the titles of which are known, on account of the impossibility of discovering copies of them either in the records of the Académie des Sciences or in any of the great Parisian libraries.

Jean Méry, Merri, or Mehery, as his name appears in different documents, was born in 1645, and died in 1722. He filled the positions of surgeon-major to the Invalides and first surgeon to the Hôtel Dieu in Paris. He was also a member of the Academy of Sciences in the section of anatomy, and was so assiduous in his labours in connection with this body that it is stated that he assisted at all its

meetings during thirty-six years, save when absent in England on a mission in 1692, and that at the greater number of meetings he read a memoir or made some communication bearing on anatomy or surgery. The greater number of these observations are collected in the volume under review, and we shall now deal with some of the more important and interesting. Perhaps his first important anatomical work was that on the ear of man, which appeared in a work by Dr. Lami, an eminent physiologist of that time, entitled *Traité de l'Ame Sensitive*, which dealt with the functions of the organs of sense. In this account he refuses to credit the membranous labyrinth with the chief *rôle* in the organ of hearing, just as he denied the visual function of the retina, placing that capacity in the choroid. The sclerotic, according to his view, was the continuation of the dura mater, the choroid of the pia mater, and the retina of the brain. The retina was insensible, because part of the brain, itself composed of an insensible substance. The pia mater, on the other hand, being highly sensitive, its continuation (the choroid) forms the sensory part of the eye. In describing the action of the iris, the accepted views of the day led him to a curious conclusion. Dilatation of the pupil, he teaches, is due to the action of the muscular fibres of the iris, but contraction follows upon the elongation of the fibres due to the flow of animal spirits therein.

Erection of the penis, he believed, to be due to muscular fibres forming part of the walls of the cavities in the spongy portions of the organ. Whilst speaking of the genitalia, we must not omit to mention that his present editor shows that he described the bulbo-urethral glands some years before Cowper, with whose name they are now associated. Amongst his anatomical writings must also be mentioned his contributions to the subject of the fœtal circulation.

In pathological anatomy, amongst many others, may be mentioned his writings on dermoid cysts of the ovary, on congenital syndactyly, and on milky ascites, which he believed to be due to a fluid which had passed through the walls of the stomach and the intestines.

Amongst surgical memoirs and observations we may cite those on empyema following fractures of the ribs, lithotomy, suprapubic puncture of the bladder (which he was one of the first to practise), rickets, cataract and glaucoma, as also his writings on vicarious menstruation, and on stricture of the urethra followed by surgical kidney. In 1678 he observed for the first time that the sac of a hernia was peritoneal, prior to which observation it had been believed that a hernia made its way out of the abdomen through a rent in that membrane.

Perhaps one of the most interesting parts of the book is that which gives his report on the operation for stone practised by Frère Jacques. This operator came to Paris in 1697, having already obtained a great reputation as a lithotomist in the provinces. At first Méry was inclined to support his claims, but shortly changed his opinion, pointing out the directions in which he believed Frère Jacques's method to be dangerous, which opinions were subsequently proved to be correct.

His operation was fatal in the greater number of cases, the neck of the bladder being sometimes separated from the urethra, and if recovery took place, incontinence of urine and incurable urinary fistulæ were the almost inevitable results.

In conclusion, we may say that those who are anxious to obtain an idea of Méry's work have only to glance over the list of communications made to the Academy of Sciences, the mere titles of which occupy eighteen closely printed pages, such a survey causing one to marvel at the diversity of the subjects dealt with and the unwearying industry of the observer.

Books such as this are of the highest historical interest: they cost their editors and arrangers an amount of labour and trouble which does not appear upon the surface and is seldom sufficiently recognised, but which is worthy of high praise and commendation.

Students of the history of anatomy, physiology, and surgery, and of the last especially, owe a debt of gratitude to Dr. Petit for the manner in which he has executed his self-appointed task of collecting and bringing together between the covers of one volume the writings and observations of a man of such interest as Jean Méry.

Bertram C. A. Windle, M.D.

NOTES ON BOOKS.

Article 302.

Bericht der K.K. Krankenanstalt Rudolph Stiftung in Wien vom Jahre 1886. (Report of the Vienna General Hospital for the year 1886.)

This work of 430 pages, bristling with statistics, is the official report of the hospital above named. A good part of the book is taken up by tables, giving the statistics in various arrangements of the patients admitted. We learn that 7,660 patients were treated in the wards during the year; 657 of these were admitted during the previous year. There were 900 deaths during the year, and 566 remained in the hospital at the end of the year. After 90 pages of general statistics, there come nearly 200 pages of statistics arranged under separate diseases. This is followed by a long series of individual clinical histories of the most interesting cases. Taking small-pox, we find from the statistical section that 110 cases were treated, most of them at the close of the year, the ordinary epidemic hospital being appropriated for cholera cases. Of this number 19 died, 85 recovered, and 6 remained in hospital. Of six cases under 1 year old five died; of 28 aged 1–10 years, four; of 46 aged 11-20, six; of 20 aged 21–30, two; of 7 aged 31–40, two; and there was one case in each of the three next decades with no death. The form was as follows. Variolois 54, V. discreta 28, Varicella 13, V. confluens 9, V. hæmorrh. 6. What is meant by the term Varicella here is not explained. It is difficult to believe that it can be the same disease which that term indicates in this country, for among the Clinical Histories we find under No. 86, 'Two children affected with varicella, who, within the incubation-period in the small-pox division, took small-pox. In a third case the diagnosis was uncertain.' The two first cases are thus given:—

A child, 4 months old, unvaccinated, was admitted with variola on Sept. 22. The child had been admitted on Sept. 2 to the small-pox hospital (a separate institution) on account of varicella. There were superficial scabs on the skin, and a few vesicles on the dorsum of each foot. On the 12th the crusts fell off, and the child was sent home. On admission into the general hospital on Sept. 22, several vesicles

were present on the head and face, a great many (discrete) on the arms, and some on the trunk and legs. Most of the vesicles were umbilicated, and perfectly developed. There were a few also on the palate and pharyngeal wall. On Sept. 25 suppuration-fever came on, and the child died on the 29th. 'Reckoning back nine days from the 25th, then the 17th was the first day of the initial fever; this agrees with the condition of the exanthem on admission. Allowing an incubation of twelve days, we arrive at Sept. 6 as the day of infection.' The second case was similar; the child was received into the general hospital with varicella on Sept. 12, and discharged cured on Nov. 24. On Dec. 1 the child was again admitted with small-pox, some of the vesicles being hæmorrhagic, and died the same day. These cases amply prove the independence of the two diseases.

The clinical cases are highly interesting—nearly a hundred are given—but there is not space for further notice. The case reported as 'lyssa' is extremely doubtful, and it is acknowledged that the diagnosis was uncertain. E. J. EDWARDES, M.D.

ARTICLE 303.

A Contribution to the Pathological Anatomy and Histology of Scarlatina. By G. F. CROOKE, M.D. Reprinted from *Birmingham Medical Review.* 1888.

DR. CROOKE has in this little volume collected a series of papers on the pathology of scarlatina, which, during the past year, had appeared in the *Birmingham Medical Review.* We shall give a brief *résumé* of the leading facts in the papers, which are well worth the attention of those interested in the subject of scarlet fever and its sequelæ. The first paper is devoted to the subject of micro-organisms in scarlatina. Of thirty selected cases ten were found to yield bacteria in the internal organs. In two pyæmic cases micrococci were found in the lungs and liver. As to the stomach the author believes that 'simple acute catarrhal gastritis occurs in a more or less marked degree in most cases of scarlatina, fatal during the febrile stage; but that in cases characterised by the exceptional severity of the gastric disturbance, where the interstitial changes are predominant, the condition is usually, if not invariably, associated with a similar acute interstitial and follicular inflammation of the mucous membrane of the intestine, and is therefore to be regarded as part of an acute inflammatory attack, of which the lymphatic tissue of the gastro-intestinal portion of the alimentary tract bears the brunt.'

The throat lesions are the effect of an acute inflammation, which attacks preferably the lymphatic structures, and consists of hyperæmia, often with œdema, over-production of tissue elements, with degenerative changes, varying from superficial necrosis (erosion) to ulceration and extensive gangrenous sloughing of the parts attacked.

In the liver the author recognises an interstitial affection which may form the starting-point of a chronic fibrous cirrhosis. In the majority of cases the interstitial hepatitis clears up as the patient recovers.

A large portion of the book naturally is devoted to the lesions of the kidneys, his conclusions respecting scarlatinal nephritis being thus summarised.

1. Already in the early stages of the fever changes have appeared in the kidneys from which the severer forms of nephritis can develop.

2. Glomerulitis is a constant and predominating feature.

3. Parenchymatous and interstitial changes are secondary, and their relative prominence would appear to depend on variations in the clinical aspects of the cases in which they occur.

4. Lastly, we meet with kidneys in which the interstitial changes are most acutely and intensely developed. These changes are dependent on, if not caused by, other factors, such as embolisms and acute lymph-cell infiltration (Wagner's acute lymphatic nephritis). Both forms are rare.

We commend this little book, the fruit of much original work, to those interested in the study of the morbid anatomy of fevers.

BERTRAM C. A. WINDLE, M.D.

ARTICLE 304.

A Manual of Comparative Anatomy of the Domesticated Quadrupeds. By N. HORMASJI EDALJI SÚKHIÁ. Bombay: Anglo-Jewish and Vernacular Press. 1887.

MR. SÚKHIÁ, who is lecturer on anatomy and physiology at the Government Veterinary College, Bombay, has produced in this little book a work which bears much the same relation to the larger volumes of Fleming and others as the 'Pocket Gray' does to its more voluminous godfather. The compendium is prepared, the author states in his preface, for the use of first-year students—to whom we think it is likely to prove useful. The descriptions are necessarily much compressed, so that the work presents a resemblance to the 'cram-book type'; but it is fair to say that it contains a very large amount of information. The latter part of the book contains two very useful and convenient tables. The first is a synoptical comparison of the anatomy of Solipeds, Ruminants, Carnivora, and the pig, which will save students much cross-reference in their reading; the second is perhaps even more valuable, considering the confused condition of our anatomical nomenclature: it is a table of synonyms of muscles, the names being taken from the works of Percivall, Strangeways, Chauveau, M'Fadyean, and Steel.

BERTRAM C. A. WINDLE, M.D.

ARTICLE 305.

The Health of Children. By ANGEL MONEY, M.D. H. K. Lewis. 1888.

THIS is an admirable little book of its kind, and it acted upon by every mother and nurse would go far to diminish infantile mortality. It judiciously avoids all allusion to the home treatment of disease, and confines itself to such general instructions upon the diet, bathing, exercise, schooling, &c., as will tend not only to preserve health but to produce the highest development of the body and its organs. The author, in rightly condemning attempts at hardening infants, errs a little, we venture to think, in the opposite direction when he inculcates a temperature of 95° for the bath of children under three years. Dr. Money considers that, as soon as a child can walk, the chances are that it will get too much rather than too little exercise. This is true; but it is true only of leg exercise, and a word might have been added as to the desirability of accustoming children to the vigorous use of their arms; a low trapeze bar is a most useful adjunct to the nursery

for children over three years, for, in swinging by the hands, they strengthen their spines and expand their chests. RALPH W. LEFTWICH, M.D.

ARTICLE 306.

Forms for Systematically Recording Observations and Results of Treatment in Affections of the Throat and Nose. By SCANES SPICER, M.D., B.Sc.Lond. London : H. K. Lewis. 1887.

THESE outlines will be of service to students ; but for practitioners versed in the specialty it is doubtful whether schemes of this description are of much value. On the one hand, they necessarily contain so many headings which are not used in any *one* case, and on the other hand, the space left under each heading is often totally insufficient to contain a description of the phenomena presented. The diagram for recording the anterior rhinoscopic appearances represents roughly a vertical section through the nasal cavities, which is of course a different thing to what is actually seen by anterior rhinoscopy, inasmuch as by this method almost all the structures in the nasal cavity are seen in perspective. In the outline of the posterior view the Eustachian cushions are drawn lower than they appear by rhinoscopy.

A blank sheet for 'Progress of the Case' and for general and local treatment adds to the value of these 'Outlines.' E. CRESSWELL BABER, M.B.

ARTICLE 307.

The American Journal of the Medical Sciences. Published by Lea Bros. & Co., Philadelphia.

IN October, 1887, a new series of this valuable journal commenced ; the work is to be published monthly instead of quarterly, and the price to subscribers is reduced to four dollars per annum ; if post-paid, the subscription is five dollars. The editors are Dr. Minis Hays and Mr. Malcolm Morris. In addition to several well-written original communications it contains a summary of the progress of medical science in all its branches, and is one of the most valuable works of the present day.

ARTICLE 308.

The Medical Annual, 1888. Published by Hamilton, Adams, & Co., London, and John Wright, Bristol. *The Medical Annual for* 1888 is a most useful addition to a medical man's library. It contains a dictionary of new remedies and a review of the therapeutics of the past year ; also a 'Dictionary of New Treatment in Medicine and Surgery,' which is an appendix to the 'Dictionary of New Treatment' published in 1887. A short article entering into details of new methods of treatment, and references to the various works and papers published during the year are given under each heading. This is the chief value of the book. Then there is an index of diseases, with the various drugs recommended for each, and the page on which they will be found mentioned ; also an index to the several articles on different affections referred to in the part devoted to new methods of treatment. The authors invite each one of their readers to send short reports of their *failures* and *successes* with new remedies and new methods of treatment. Such reports should be directed to the Secretary of the 'Clinical Investigation Committee,' care of the Publishers, who will also be glad to receive the names of those who will join the committee, and assist in its work.

RICHARD NEALE, M.D.

ARTICLE 309.

Alassio; a 'Pearl of the Riviera.' By Dr. JOSEPH SCHNEER. 12mo., pp. 86. London : Trübner & Co. 1888.

ALASSIO was once mentioned by us in a notice of a few pages which Dr. Dickinson had devoted to it. Some years ago Dr. Schneer seems to have published a little work on it, which we have never seen, of a more medical nature than the one now before us. This little work supplies some information about the history and the beauties of Alassio and its neighbourhood, but fails entirely to supply medical information that can be of use for invalids. Details are wanted about Alassio. We believe that it has made considerable progress, but it is the general impression that it is rather limited and shut in.

ARTICLE 310.

Études sur l'Hydrothérapie. Par le Dr. P. GLATZ. 8vo., pp. 96. Paris : O. Doin. 1887.

FOR those who are interested in the subject, this *brochure* gives an excellent sketch of modern hydropathy, mainly according to French views. A *résume* and comparison of all the ordinary hydropathic practices is furnished. Douches, especially the alternating hot and cold ones, figure as the chief remedies. Their application is chiefly to the spine in nervous and hysterical affections. Dr. Glatz gives the history of several interesting cases of that nature. The special object of the work is to give an account of the establishment at Champel, near Geneva ; but it contains much general information.

ARTICLE 311.

The Turkish Bath; its Uses and Abuses. By W. B. HUNTER, M.D. &c. 12mo., pp. 72. Cassell & Co. 1887.

THIS seems to us to be an extremely good and practical guide to the subject of which it treats. It is an endeavour to explain the several actions of the bath, the modifications in its processes, whereby these may be separately obtained, and the morbid conditions to which they more or less apply. Dr. Hunter complains that a therapeutic agent of such importance, the effects of which require to be carefully studied, is left very much to the discretion of the dispenser, and the chance whim of the patient. The author hopes to bring about certain reforms in the heating and ventilating of the chambers. His chief practical novelty is his recommending that usually the patient should commence with the hottest chamber. The book gives practical details as to the arrangements of baths, and defines clearly the varieties of baths suited to the particular condition of patients. J. MACPHERSON, M.D.

ARTICLE 312.

Lessons on Prescribing and the Art of Dispensing. By W. HANDSEL GRIFFITHS, Ph.D., L.R.C.P.E. New Edition. London : Macmillan & Co. 1888.

THE art of prescribing is fast falling away and the present race of practitioners, to say nothing of students, show but little respect for the fashion of

their fathers in this respect. Until the time comes, however, when Latin has been definitively displaced in favour of the vernacular, it is only becoming that the subject, subordinate though its position, should receive a proper amount of attention. Dr. Griffith's little book has always been deservedly popular as a guide to this art, and now that it has been adapted to the last edition of the 'British Pharmacopœia,' it is probably the best of its kind. The chapters on the principles of medicinal combination and incompatibility are particularly to be commended.

ARTICLE 313.

The *Graphic Clinical Chart*, designed by Dr. HANDFORD, of Nottingham, published by Messrs. Wodderspoon & Co.

THIS chart is a successful attempt to depict graphically variations in pulse and respiration as well as in temperature. The chart is so indexed that by the use of pencils or inks of three different colours, it is possible to see at a glance what has been the course of each of these three phenomena. We can quite believe that, both in hospital and private practice, these charts would be found to simplify clinical observation and facilitate a prompt apprehension of the actual condition of the patient.

ARTICLE 314.

Biliousness, its Causes and its Rational Treatment. By ADOLPHUS E. BRIDGER, M.D., F.R.C.P., &c. Third Thousand. London: Henry Renshaw.

THE 'late fire at Mr. Whiteley's' almost did for this work what, according to the popular legend, the water did for the missing books of Euclid. Thanks, however, to the energy and application of the author, the disaster has been repaired. It is a popular treatise on a popular subject, though we doubt the accuracy of the author's assertion that biliousness is more common in England than elsewhere. The style is humorous and the book is certainly interesting reading, but, unless as an inducement to sufferers to treat themselves, it is difficult to understand the studied simplicity of the text, extending as it does to giving prescriptions in plain English.

ALFRED S. GUBB.

DIETETIC NOVELTIES.

FLORADOR.

FLORADOR is a preparation of wheat, which will undoubtedly take front rank in that class of foods. It is a practical demonstration of the value of the wheat grain as an article of diet, when by the aid of suitable machinery it can be properly desiccated and its constituents properly separated. Florador is introduced in three sizes of granules; large, medium, and fine. The large grained is most suitable for soup, and we believe will be found better adapted for that purpose than either vermicelli or tapioca, and it makes excellent porridge. The medium-grained Florador, boiled or baked, makes good puddings. The nutritious suet dumpling is rendered more easy of digestion when made with this preparation, and it is also claimed that it may be used with advantage in making bread. The fine-grained Florador is valuable for blancmanges and similar dishes, also for cakes, biscuits, &c. It is of the consistency of ground rice. As a matter of course it contains a good proportion of albumenoids and flesh-forming constituents, and will be found valuable as infant's food. It is made from the finest selected wheat, and in the hands of an intelligent housewife may be made useful for a variety of dishes besides those enumerated. Florador may be purchased at any grocers or chemists throughout the kingdom.

RIZINE.

UNDER this title another new food has recently been introduced as a patented article. It is a cooked food in the form of flakes or small husks. It is easily prepared for use, as it dissolves readily in hot milk or water, and scarcely requires boiling; a great advantage where food is required quickly. It is adapted for all purposes of farinaceous preparations in general, including food for infants. It contains a large amount of nutriment, and is readily digested by the weakest stomach, the fact of the cooking process that it undergoes materially assisting assimilation. Cooked foods undoubtedly offer advantages over those prepared in the raw state, and as there are very few of the former in the English market, Rizine will doubtless command a ready sale.

NEW INVENTIONS.

A NEW TRUSS FOR INGUINAL AND FEMORAL HERNIA OF ONE OR BOTH SIDES.

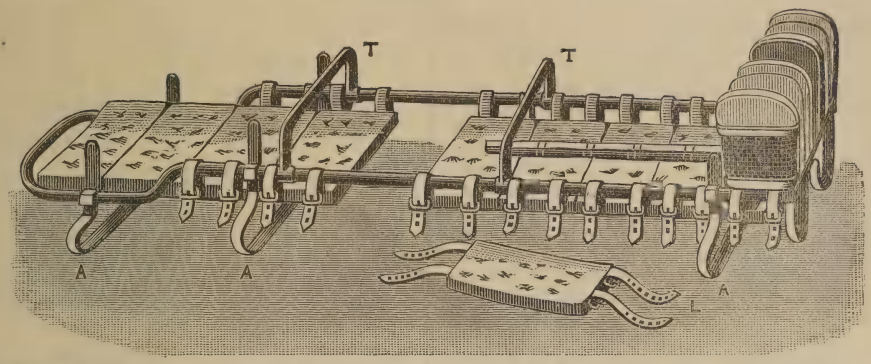
IN the *British Medical Journal*, February 1888, p. 424, Mr. Bushton Parker describes a form of truss made by Mr. Critchley, of Liverpool. It consists of a padded steel plate that covers the pubes and both inguinal and femoral apertures, being held in place by a strap round the waist and two between the thighs. The plate is almost triangular, its upper side, with rounded corners, lying horizontally above the pubes, but instead of a lower angle there are two wings, and between them a space cut out to fit around the male genitals, which are thus closely embraced at their root. This truss is not of use for large, unwieldy, or wide-necked herniæ; nor is it in any sense a spring truss, or one that can by pressure lead to the curative adhesion of a hernial sac, but it is of value in small, narrow-necked herniæ, femoral and inguinal, of one or both sides. It is also an admirable protection when hernia is threatened, but has not yet descended.

DR. NICAISE'S NEW SPINAL APPARATUS.

DR. NICAISE has invented a new apparatus to be employed in certain affections of the spine and pelvis, in order to maintain the patient in a passive state. The use of Bonnet's grooved splint, which is frequently employed in cases of this description, is attended with certain drawbacks. The patient has to be raised if dressings are required. The apparatus is very difficult to clean. It does not permit the application of antiseptic dressings in such cases as resection of the hip. The lower part of Dr. Nicaise's apparatus (constructed by M. Aubry) is composed of movable valves, made of wire trellis-work, surrounded by a strong frame.

The frame of the apparatus is supported by three

feet, A A A, which may be lengthened or shortened at pleasure. Two movable iron hoops, T T, fixed to the frame, above it, render the apparatus more solid. The metallic plates, more or less concave, are attached to each side of the frame by two leather straps, which may be lengthened or shortened as required. They are covered with padded cushions, which may be replaced by India-rubber cushions filled with air or water. L represents one of these plates with a padded cushion attached to it. The number of plates varies as the case requires. It is easy to remove any one of them without disturbing the patient. The plate corresponding to the perineum or pelvis can be removed for micturition or defecation, and the necessity for a posterior orifice, as in Dubonnet's *gouttière*, is thus avoided. M. Nicaise's apparatus may be raised on the three feet, A A A, to any height above the level of the bed. The operator can thus dispense with the different apparatus usually employed to raise the patient from the bed on to the *gouttière*.



MISCELLANY.

The French Association for the Advance of Science has recorded the following grants to the following *savants* to allow them to pursue their investigations :—1,000 frs. (£40) to M. Topinard, to execute his map showing the colour of hair and eyes in the different departments in France ; 100 frs. (£4) to Dr. Maurel for his researches on the causes of the influence of marshes ; 200 frs. (£8) to Dr. Léon Petit, to enable him to publish the works of Jean Méry (see page 130) ; 500 frs. (£20) to M. Turquan, so that he may publish a statistical map of the population of France.

Multiple Abscesses Mistaken for Farcy.—At the meeting of the Société Médicale des Hôpitaux, of Jan. 13, M. Féreol reported on a morphinomaniac patient who presented symptoms of farcy. Inoculations, made by M. Nocard, with the virus gave negative results. It is evident that the abscesses from which the patient suffers result from the incisions made by himself to introduce the morphia. He has been suffering from morphinomania during four years.

Hospital Nurses.—The School of Instruction for Midwives at the Maternity Hospital at Liège has organised a supplementary class for the training of female hospital nurses. The instruction given at this class will be of the most comprehensive kind. The pupil will be thoroughly initiated in the art of dressing and bandaging wounds, and will have the opportunity of acquiring a thorough knowledge of every kind of treatment and remedy for physical and mental diseases in all their forms. Those who have proved themselves thoroughly capable of undertaking sick nursing, are furnished with a certificate, testifying to their ability to act either as a private or hospital nurse.

A curious case of lethargy is reported from Bordeaux. A woman of 57, who had been ailing for many years, fell asleep after an attack of the affection from which she was suffering. Several days passed, and the patient still remained asleep. She was perfectly still, and her breathing was regular. According to a wish previously expressed by her she was conveyed to a village at some distance from Bordeaux. Shortly after her removal she expired, without any apparent suffering, and without waking from her state of torpor.

In the course of their experiments on anæsthetised dogs, MM. Dastre and Morat have frequently observed curious phenomena of perfectly rhythmic intestinal gurgling, which might be produced or suppressed at the pleasure of the operator. An instance of the kind is furnished by the following case. A spaniel was anæsthetised by M. Dastre's method (atropine, morphine, and chloroform) in order to prepare and stimulate the sensitive radix and motory radix of the second pair of dorsal nerves previous to special researches. The animal was allowed to rest until the chloroform was eliminated. It was then submitted to a limited action of curare, so that the respiratory movements persisted. Tracheotomy was effected ; a cannula was placed in the trachea. During the intervals of rest a distinct intestinal gurgling was discerned. This gurgling, which was regular and rhythmic, occurred every fourteen seconds. The cannula was then stopped up by the finger. The animal was threatened with suffocation. The gurgling was heard at intervals of thirty seconds ; finally it disappeared. The animal was seized with the characteristic convulsions of asphyxia. Two minutes elapsed without any gurgling sound. The finger was removed from the cannula. The animal breathed heavily. The gurgling reappeared. This experiment was repeated six times. MM. Morat and Dastre intend investigating the origin and nature of this gurgling at a future period.

A Stomatological Society for the scientific study of affections of the mouth and teeth has been founded. This Society will be composed of the members who have founded it, of titular members, national and foreign corresponding members, and honorary members. The founders consider that stomatology is an essential branch of medical science, and demands a complete and special course of instruction. Medical men desirous of becoming members are requested to communicate with any of the following members :—M. Magitot, president, 8 Rue des Saints Pères ; M. Cruet, 2 Rue de la Paix ; M. Galippe, 65 Rue Sainte Anne ; M. Moreau Marmont, 23 Boulevard Haussmann ; M. Pietkiewicz, 79 Boulevard Haussmann.

M. Edmond Blant, director of the French School at Rome, reported the discovery by Lord Lumley, two years ago, of a number of curious little coloured images at Nemi. These images, which were merely trunks, without head or limbs, had an opening in the chest, in which were the viscera, heart, lungs, and liver, represented in a most primitive manner. M. Blant has just announced a second

discovery of similar images near the Temple of Esculapius at Rome, where in ancient times the god was supposed to work marvellous cures. These images are larger and better executed than those discovered at Nemi.

A NEW journal, entitled the *Revue illustré de Polytechnique médicale, et de chirurgie orthopédique*, has just appeared. This journal, edited by M. Albert Leblond, physician at St. Lazare, and editor of the *Annales de Gynécologie*, and by M. Chenet, formerly house-surgeon in the Paris hospitals, will publish descriptions, with plates, of all the newest instruments and scientific inventions. An edition in German will be published in Switzerland, to appear simultaneously with the French edition in Paris.

ANTIPYRIN.—After the action comes the reaction; after the enumeration of advantages comes the schedule of inconveniences. For several months past only the beneficial results of the administration of antipyrin were heard of; but more recently it has been discovered that this undoubtedly useful drug may, under certain circumstances, give rise to various cutaneous eruptions, gastric troubles, and even to grave cerebral symptoms, especially in the aged. According to *L'Union Médicale*, the demand for antipyrin is so great at present that the *Pharmacie Centrale*, at Paris, can only deliver one-half of the quantities ordered. It is not improbable that the pressure put upon the manufacturers may account for some of the accidents which have been reported as following the administration of the drug, accidents which, according to Dujardin-Beaumetz, are due to a certain proportion of benzine left in the manufactured product. Fortunately the evil is not without a remedy; in persons who are intolerant of antipyrin, the substitution of acetanilide will enable the same results to be obtained without untoward symptoms. When these do occur, they may be relieved by subcutaneous injections of atropin.

NEALE'S MEDICAL DIGEST.—The cheap issue of Dr. Neale's *Medical Digest*, advertised in this month's issue, will place this work within the reach of all, and we wish to take this opportunity of correcting an erroneous idea in many minds that the work is of value only to those who have libraries within their reach. This is emphatically not the case, for the mere reading of the *Digest* imparts an incredible amount of information upon every subject connected with general every-day practice, and this without looking up a single reference. Such is the value of the work, in and for itself, that for medical men in out-of-the-way parts of the world the *Digest* alone forms an invaluable library; indeed, no busy practitioner, without the aid of the *Digest*, can compete with him who is its possessor. To realise its value the work must be studied as the author directs. It is in very truth the busy practitioner's *vade mecum*.

EXAMINATION OF CANDIDATES FOR HER MAJESTY'S INDIAN AND NAVAL MEDICAL SERVICES.

FEBRUARY 1888.

ANATOMY AND PHYSIOLOGY.

SIR JOSEPH FAYRER.

MONDAY, FEB. 13, 1888—FROM 10 A.M. TO 1 P.M.

1. Describe the formation of the cervical portion of the vertebral column, note the characters of the vertebræ, especially of those which are peculiar, and the mode in which they are connected with each other. Describe also the development of a vertebra.

2. Describe the origin, course, and distribution of the ulnar nerve, noting its communications with other nerves in relation especially to the innervation of the hand.

3. Give a description of the dissection by which you would expose the deep perineal fasciæ, the prostate gland and neck of the bladder. Give an account of the parts met with in the dissection.

4. Describe the structure, anatomical relations, and functions of the spleen.

5. Describe the glandular structure by which saliva is formed. Give an account also of the chemical composition and physiological uses of the secretion.

SURGERY.

MR. POLLOCK.

MONDAY, FEB. 13, 1888—FROM 2 P.M. TO 5 P.M.

1. A patient has caries of the lower dorsal, or upper lumbar vertebræ, with much suppuration. Describe the symptoms which would indicate the commencement of caries; and, as suppuration continues, in what respect may the symptoms vary, and in what positions may the pus present itself. Describe the treatment to be adopted in the earlier, as also in the later, stages of such a case.

2. What treatment should be adopted in case of suspended animation from immersion in the water? What subsequent symptoms may arise in such a case, after respiration has been completely restored, and what should be the treatment?

3. What are the conditions of urine to which attention should be directed before recourse is had to any surgical operation, except such as is immediately imperative? Relate any instance in which the condition of the secretion, rather than the operation, may have been the cause of death after such operation.

4. Describe the various causes, local and constitutional, which may give rise to inflammation of veins, the evils which such inflammation may effect, and the treatment of these various conditions.

5. Describe the injury known as dislocation of the foot, inwards or outwards from the tibia, the complications which usually attend this injury, and the treatment to be adopted.

6. In what conditions of system does the form of eruption known as Rupia usually commence? Describe it in its first and subsequent stages, and the treatment to be pursued locally and generally.

MEDICINE.

SIR WILLIAM AITKEN.

TUESDAY, FEB. 14, 1888—FROM 10 A.M. TO 1 P.M.

1. Discuss and explain, from an anatomical and physiological point of view, the phenomena and causation of the paroxysmal suffocative dyspnœa which may occur in cases of thoracic aneurism, and as bearing on the question of relief by tracheotomy. Say also what may otherwise be done for relief of the dyspnœa, giving reasons for the treatment you suggest.

2. Describe the symptoms and morbid anatomy (macroscopic and microscopic) in cases of multiple sclerosis of the spinal cord.

3. Describe a case of typhus fever during the first ten days, with special reference to the gastric, cutaneous, and nervous phenomena.

4. What meaning do you attach to 'compensation' as regards the condition of the heart in cases of disease of its valves? and say how you determine whether or not compensation is sufficient or complete.

5. Describe the anatomical varieties of fibroid tumours of the uterus, the symptoms to which they give rise, and the possible influence they may exert on conception, pregnancy, and parturition.

6. Define (1) 'Galvanisation'; (2) 'Faradisation'; and indicate the uses to which they are, or may respectively be, put in the treatment of disease.

CHEMISTRY.

DR. ALLMAN.

TUESDAY, FEB. 14, 1888, FROM 2 P.M. TO 4 P.M.

1. Write down in the form of an equation the chemical changes which take place in the preparation of carbonic acid by the action of hydrochloric acid on marble.

2. By what test may the presence of sulphuric acid be detected?

3. Give the formulæ which expresses the chemical composition of each of the following substances:—Sulphuretted Hydrogen, Carbonate of Soda, Epsom Salts, Nitre.

NATURAL SCIENCE.

DR. ALLMAN.

TUESDAY, FEB. 14, 1888—FROM 4 P.M. TO 6 P.M.

Zoology.

1. Mention one or more instances in which the two germinal layers of the embryo—Ectoderm and Endoderm—continue to be recognisable through life as persistent structures.

2. On what erroneously interpreted phenomenon did Ehrenberg base his doctrine of the polygastric structure of the Infusoria?

3. Refer to its proper class and order an animal with the following characters, and give one or more examples:—Respiration exclusively pulmonary, heart with two ventricles incompletely separated, a single occipital condyle, body with a dorsal and ventral bony shield, jaws destitute of teeth.

Botany.

4. Whence do plants obtain the carbon of their tissues?

5. What are interpetiolar stipules? Cite from the Pharmacopœia a natural order of plants characterised by the possession of interpetiolar stipules.

6. Refer to its natural order a plant with the following characters:—

Corolla monopetalous, regular, 5-lobed, ovary superior, 1-celled with a free central placenta. Fruit capsular with numerous albuminous seeds. Stamens 5 inserted on the tube of the corolla, each opposite one of its lobes. Plant herbaceous. Adduce one or more examples of this order.

Physics.

7. Enumerate the colours in the solar spectrum in the order of the refrangibility of the rays, beginning with that in which the rays have the highest index of refraction.

8. What are the conditions under which water may be cooled below 0° centigrade without freezing?

9. What is the numerical coefficient of the expansion of gases?

The London Medical Recorder.

Article 315.

WIGGLESWORTH ON HÆMORRHAGES AND FALSE MEMBRANES WITHIN THE CENTRAL SUBDURAL SPACE OCCURRING IN THE INSANE.*

This essay reopens the interesting question in cerebral pathology as to whether the morbid conditions, which have been described under the term pachymeningitis interna hæmorrhagica, are the result of inflammation or of effusion solely of blood beneath the dura mater.

Dr. Wigglesworth argues the matter very fairly, and quotes authorities to support both sides of the question. His own views, however, are decidedly in favour of the effusion theory pure and simple.

As Dr. Wigglesworth remarks:—'This view is not a new one; it was advocated before Virchow described the morbid changes in terms of inflammation, and it is due to the authority of that great name that we are indebted for the predominance of the inflammatory theory. Having been myself (writes Dr. Wigglesworth) indoctrinated in this latter view, it was only after the repeated observation of cases in which the signs of inflammation were conspicuous by their absence, whilst those of hæmorrhage were abundantly manifest, that the conclusion was forced upon me that this view was not a tenable one.'

Dr. Wigglesworth then quotes Bristowe, who describes this condition as a peculiar chronic form of inflammation of the dura mater, usually termed pachymeningitis, commencing in or near the middle meningeal artery, with the formation of films, which become developed one upon the other, until the formation attains considerable thickness. Owing to the large size and delicacy of the blood-vessels formed in this film, rupture, with extravasation of blood, is of frequent occurrence. A description, in all respects similar to the above, is found in Ziegler's *Pathological Anatomy*, under the name of chronic internal pachymeningitis.

Gowers, whilst describing the affection under the name of hæmatoma of the cerebral meninges, defines it as inflammation of the dura mater, with formation of a membranous vascular tissue, into which hæmorrhage takes place.

Dr. Savage says these false membranes are due to pachymeningitis.

Dr. Mickle seems to leave it an open question 'whether this organised formation is primarily of hæmorrhagic or of inflammatory origin.'

Dr. Clouston, agreeing with Dr. Wigglesworth, says a false membrane is found between the dura mater and arachnoid, which is the so-called *pachymeningitis hæmorrhagica interna* of the Germans, a ridiculous and misleading name, *for it is not the result* of inflammation at all.

So much for Dr. Wigglesworth's references to authorities. As we shall presently point out, this condition is very frequently, if not most frequently, found in general paralysis.

Turn we to Crichton Browne (West Riding Asylum Reports, vol. vi., p. 190), who writes: 'The inflammatory theory (*i.e.* meningitis) seems to me more reasonable and more in accordance with the facts before us than any other theory that has been propounded.'

'Dr. Mickle has shown that a rise in temperature often accompanies a maniacal paroxysm (in general paralysis), and precedes convulsive and congestive seizures.'

'An interesting observation of Dr. Mason's that there is an increased elimination of urea in general paralysis points, I think, in the same direction as the elevated temperature towards an inflammatory process in the cortex.'

The brains have been seen to be congested, the pia mater engorged, the adhesions dense, the membrane sticking to the grey matter, which is of a reddish colour, the arachnoid is thick and opaque, there is œdema of the pia mater, atrophy and softening of the brain, dilated and tortuous vessels, copious effusion of serum, and, upon microscopic examination, lamination of the layers of the pia mater, distension of the minute vessels, deposits of hæmatoidin, dilatation and tortuosity of vessels, disorganisation of the cells, with accumulations of molecular *débris* round their nuclei, all such appearances being, or not being, connected with the presence of inflammation.

To return to Dr. Wigglesworth, he says, 'the possible agency of traumatism has been as far as possible excluded.' This is very fair, as, of course, we have now to deal with either rupture of minute vessels or exudation through the walls of the capillaries. In the forty-two cases out of the 400 examined in which the subdural space contained either blood or membrane or both combined, in one case mention is made of fluid blood only; in seven others fluid blood was combined with recent clot; in all the rest there was more or less of a membrane present.

Dr. Wigglesworth argues that if, as the seven cases prove, blood may be found in considerable quantity without the presence of any trace of such a membrane, why is it necessary to call in the aid of a membrane to account for it in any case. We conclude that here by the word membrane Dr. Wigglesworth means an organised membrane, the result of some event of inflammation. In fact, the learned writer believes that the conclusion is strongly suggested that the membrane is formed from the blood, and not the blood from the membrane.

That the first agent in the production of these arachnoid effusions and cysts is the blood there cannot be a doubt. It is either, as we have said, poured out upon the brain-substance from rupture of minute vessels, or the liquor sanguinis passes by exosmosis through the walls of the capillaries. In any case the blood or the vessels must be in an unnatural condition. Putting aside for the present all considerations of rupture and exudation, let us regard the pathological sequence of events as primarily due to some altered condition of the blood. The results of a clot produced by anæmia, the results of fibrinous deposits on the valves of the heart, the repara-

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* *Hæmorrhages and False Membranes within the Cerebral Subdural Space occurring in the Insane (including the so-called Pachymeningitis).* By Joseph Wigglesworth, M.D.Lond., County Asylum, Rainhill, Lancashire. Being the Essay to which the £10 10s. Prize and Medal of the Medico-Psychological Association were awarded. (*Journal of Mental Science*, January 1888.)

tive process seen in a cut finger where some altered condition of the blood is probably due to the influence of the external atmosphere, the effusion of a serum in an ordinary blister, the transformation of this serum into pus, all such phenomena point to alterations going on in the blood. Dr. Wigglesworth gives us a valuable hint with regard to the general etiology of the condition under discussion. He says, 'It seems worthy of note that phthisis is put down as the cause, or a part cause, of death in a number of the cases given in his tables, yet further on we feel somewhat disappointed with the statement that 'it must at once be admitted that in the majority of cases no symptoms capable of recognition (*i.e.* of arachnoid effusions or cysts) are produced.' With this the reporter begs humbly to differ. In a paper published by him in the first volume of the *West Riding Asylum Reports* (p. 230 and p. 220) he has stated the probability that some impoverished condition of the blood predisposes to their formation. In one case repeated crops of boils harassed the patient; in another amenorrhœa with anæmia chlorosis was present, in two cases erysipelas, in three purpura, in four œdema of the legs, and in no less than six (out of ten cases) tubercular deposits were found in the lungs.

The point upon which we wish to dwell is that Dr. Wigglesworth is both right and wrong in his conclusions.

With regard to these hæmorrhages being primarily due to some altered condition of the blood, we entirely agree, but with regard to these membranes being formed independently of some inflammatory process, we entirely disagree, that is, if our notions of what inflammation is are not too old-fashioned.

Sir Thomas Watson has told us that there are certain 'events' which occur in inflammation, the chief of which are serous effusion, fibrinous deposit, the formation of pus, and finally gangrene. It is true that the term inflammation usually implies elevation of temperature. But how about frost bite? How about Dr. Wigglesworth's case (No. 27), in which a thick laminated membrane was found after death coating the whole of the inner surface of the dura mater, the patient having nine months before fallen off her chair in a fit, during which, he states, the temperature was lowered, being reduced to 95°·5. We do not lose sight of the fact that in the apoplectiform attacks of general paralysis the temperature frequently goes up. But then this brings us to the point we wish to lay before our readers for their consideration. Does inflammation always imply increase of temperature? If so, are serous, fibrinous, puriform, gangrenous or frost-biting phenomena properly classed under the heads of inflammatory processes? We believe that they are.

Of course the presence of blood in some form or other is inevitable. But in addition, we maintain that some inflammatory process, not always accompanied by increase of temperature, is absolutely necessary for the formation of membrane.

If this is not the case, the sooner the ABC of pathology proper is amended the better.

We cannot conclude without a note of admiration with regard to Dr. Wigglesworth's conscientious and exhaustive paper. The difference between reading it and collecting the necessary data for its compilation are as great as are those between travelling by express and laying down a line of railway for the use of future generations.

HENRY SUTHERLAND, M.D.

ARTICLE 316.

HOLMES ON PRIMARY TUMOURS OF THE BROAD LIGAMENT.

DR. HOLMES, of Chicago, read a contribution on this subject at a meeting of the Chicago Gynæcological Society, in November 1887.* He had recently operated on a woman, aged 35, the mother of one child, 3 years old. In February 1886 the cervix, which was lacerated, was sewn up, and no abnormal conditions were detected in the pelvis. A pessary was afterwards worn, for 'a slight retroversion,' for a month or two. At the end of May the uterus was found somewhat enlarged; in July 1886 a small tumour was detected behind the uterus, it was movable, and felt like a displaced, enlarged ovary. This tumour grew rapidly, and became less and less movable, and on June 5, 1887, it was removed. On opening the abdomen it was found impossible to bring the almost immovable tumour opposite the line of incision; it lay close to the laterally turned uterus, and filled the right side of the pelvis. Two-thirds of the tumour were visible, covered with smooth peritoneum, 'which was reflected backward and directly forward upon the wall of the pelvis.' No ovary was found on the right side; the left ovary seemed perfectly healthy. The tumour felt hard, elastic, and smooth. A transverse incision was made through its peritoneal covering, and the tumour was then enucleated. 'The broad base from which the tumour was removed was then sewn through with a curved needle and strong silk. This was tied at every stitch. The peritoneal edges were trimmed off, turned in, and fastened with fine silk.' The patient recovered. The tumour bore all the appearances of a uterine fibroid. The cut surface was smooth and white, with a few cavernous sinuses filled with a clear serous fluid. Microscopic examination showed, according to Dr. Holmes, that it was made up of plain muscle-cells; near the blood-vessels the nuclei were very large, ovoid, and spherical. [The author refers in his paper to Kleinwächter's ingenious theory, not based on mere logic, that uterine myomata are developed from the muscular fibres of small vessels, the round cells with large nuclei representing part of the process.] Dr. Holmes believed that the tumour was developed in the broad ligament. He drew up a table of seventeen cases of primary tumour of the broad ligament.

[Of these the tumour was in twelve cases described as though similar to a uterine fibro-myoma, the nomenclature varying considerably, terms like 'leiomyoma,' 'fibroid,' 'myofibroma,' being employed; in one of these cases the anatomical diagnosis was 'cystomyoma teleangectodes cavernosum.' One case was set down as 'fibro-sarcoma;' two as 'sarcoma'; in two the nature of the tumour was not specified.—*Rep.*]

The fact that plain muscular fibre undoubtedly exists between the folds of the broad ligament appeared sufficient to explain the origin of a myoma in Dr. Holmes's case. He felt assured that the tumour could not be uterine; 'when first observed, it was quite a distance from the uterus, and freely movable from it in the pelvis.' He felt equally certain that the tumour was not ovarian.

[We do not consider that Dr. Holmes's arguments on this point were quite satisfactory. No right ovary was found; and though this might signify that

* *The Journal of the American Medical Association*, Feb. 18, 1888, p. 191.

it had become flattened out and atrophied by pressure of the tumour (as we have seen in large broad ligament cysts), there was reason to believe that the tumour was originally ovarian, burrowing between the folds of the broad ligament. Myoma of the ovary is by no means unknown, and Leopold's opinion that the pedicle of an ovarian fibroma is long and simple and does not include the tube, is not in all cases correct. The determination of the origin of a solid pelvic tumour which has attained large proportions is often all but impossible.—*Rep.*] Dr. Holmes's paper deserves study; it contains a most valuable series of references, and the very uncertainty of the nature of his own case is in itself important. We regret that no drawings of the tumour were furnished with the text; but we are well aware that the original relations of growths are irreparably disturbed during abdominal section.

Alban Doran.

Article 317.

NEUMANN ON SYPHILITIC MYOSITIS.

In this paper (*Viertelj. für Derm. und Syph.*, No. 1, 1888) Professor Isidor Neumann, of Vienna, discusses the subject of syphilitic myositis with particular reference to the external sphincter ani, a muscle which, he remarks, must now be added to the list of those known to be attacked by syphilis. The occurrence of fissures around the margin of the anus in syphilis is, perhaps, sufficiently accounted for by the action of the sphincter ani on a mucous membrane that has lost its extensibility from cell-infiltration of the subjacent cellular tissue; but the persistence of the pain after the fissures have healed, as also the cases in which pain is present without any fissures at all, render an examination of the other neighbouring tissues necessary for the full explanation of the symptoms.

The histological changes in myositis, according to the results of the author's observations, which are illustrated in a drawing appended to the paper, consist chiefly in the formation of granulation cells, which closely surround the blood-vessels in the perimysium, the larger of these vessels especially being also seen to be gorged with blood, widened, and tortuous. Proliferation of the perimysium itself also takes place, and there is an increase in the number and alteration in the distribution of the nuclei of the sarcolemma. In the normal state these nuclei are disposed singly, with their long axes directed along the muscular fibre, but in myositis they are closely crowded together in rows and in groups of from five to twelve each. If the change continue to advance, the interstitial connective tissue becomes more and more filled with granulation cells, the muscular fibres get starved, and, when the morbid process comes to an end, the muscular substance appears to be replaced by connective tissue.

In the case of acute syphilitic myositis, however, which is the only form of the disease dealt with in the present paper, neither the morbid change nor the substitution of connective for muscular tissue extends so deeply as in some other forms of the affection.

The author gives notes of six cases in which he diagnosed syphilitic myositis of the external sphincter. Four of the patients were women, one was a man, and in the sixth the sex is not mentioned. The man had contracted syphilis four years previously, but in none of the others had the disease lasted more than one year. The time of appearance of the myositis was therefore earlier than is usual in syphilitic disease of other muscles. The symptoms of this affection are severe pain on pressure over the part, and during movement, but especially in combination with tenesmus, during and after defecation. In some cases the pain lasts for hours, and sometimes for days. In all the six cases there were also other local manifestations of syphilis, such as rhagades, fissures, or papules, and in one case a fistula was present. In three of the cases the sphincter was divided and a portion of the muscle removed for examination. In the first of these the microscope showed both in longitudinal and horizontal sections closely packed proliferation of nuclei in the sarcolemma. The muscle nuclei also appeared to be increased, and were crowded together in groups of from ten to fifteen each. The blood-vessels were tortuous, widened, and distended with blood-corpuscles; there was also cell-proliferation around the veins and lymphatics. In the second case examination of the muscle showed similarly closely packed cell-proliferation in the fibrillæ and infiltration of the fasciculi in the periphery, and in the vicinity of the vessels. In the third specimen all the sections of the excised muscle showed a high degree of infiltration. In the three cases in which no operation was performed the pain lasted for weeks and even months, and then was only overcome by energetic antisyphilitic general treatment. The author remarks that the sphincter ani appears to be more frequently attacked than other muscles. The six cases here reported all came under his notice in the year and a half which had elapsed since his attention had been directed to the subject; while of syphilitic disease of other muscles he had only seen four cases in five years.

Arthur Cooper.

Article 318.

BIONDI ON FISSURES OF THE LIPS.*

In this paper various points of interest, pathological and anatomical, in relation with hare-lip and cleft palate are dealt with.

[The subject of the development of the intermaxillary bone is one upon which many papers have appeared during the past few years. Albrecht, among these recent writers, maintains that the intermaxillary bone is developed from four centres, two on each side. This theory is denied by Th. Kölliker, who upholds the older idea that the bone in question is formed from but one centre on either side. The subject has also been dealt with by Sir William Turner in a paper in the *Journal of Anatomy and Physiology*, which will probably be familiar to English readers.—*Rep.*]

The author of the paper under review in dealing with clefts of the palate concludes that:—(1) In many cases of cleft palate in mammals the *sutura incisiva* is visible external to the fissure; (2) incisor teeth are found external as well as internal to the cleft; (3) supernumerary teeth often co-exist with cleft palate; (4) the cleft is bounded externally by the *Processus nasalis*, and internally by the *P. palatinus* of the intermaxillary bone. Passing from

* 'Lippenspalten und deren Complicationen.' Von Dr. D. Biondi (Virchow's *Archiv*, Band cxi., Heft 1, p. 125.)

this to the embryological question of the intermaxilla, he concludes from his study of sections of embryos, human and animal, that two bony centres exist for each half of this bone. One appears in the neighbourhood of the maxillary process, the other in that of the inner nasal process. These he names the gnathogenous (*γνάθος*, cheek), and metopogenous (*μέτωπον*, forehead) centres. The views held up to the present as to the position of the two centres are incorrect, since the former lies at once external and anterior to the latter. The metopogenous intermaxilla appears first after the closure of the palatine plate. From the point of its first appearance it grows upwards to form the ascending nasal process, and downwards to form the anterior border of the intermaxilla proper, and in animals with incisor teeth the anterior border of the alveolus. Externally it grows to unite with the superior maxilla and internally to join its fellow of the opposite side. The metopogenous intermaxilla forms the hinder wall of the alveolar process, and unites with the body of the bone not sagittally but frontally. The *sutura palatina* runs between eight different bones—viz., two gnathogenous and two metopogenous premaxillæ, two superior maxillæ, and two palate bones. The *sutura incisiva* runs between the metopogenous intermaxilla and the superior maxilla if the gnathogenous does not send out a bony process; should it do so, the suture runs between gnathogenous and metopogenous on the one side and superior maxilla on the other. Finally the *sutura inter-alveolaris* runs between metopogenous and gnathogenous intermaxillæ.

Three forms of cleft are met with as a result of a failure of various embryonic processes to unite.

1. *Hare-lip and cleft palate.* Failure of union between the inner nasal process on the one side, and the outer nasal process and superior maxillary process on the other.

2. *Facial cleft* (Schräge Gesichtsspalte). Failure of union between inner and outer nasal processes on the one side and superior maxillary process on the other. In these cases, as in the former, a palatine cleft may pass between the metopogenous and gnathogenous intermaxillæ, and in this event the former appears on the surface of the face. The latter cannot form the anterior part of the incisive sockets, and this consequently falls to the part of the former. This not being hindered in its growth by the gnathogenous bone assumes an unusual size, and becomes firmly connected with the vomer, especially in double cleft palate, when it forms the mesial piece.

3. *Cleft of the mouth.* [illegible] cleft between the superior and inferior maxillary [illegible] tesses which may extend to the ear.

The paper concludes with a discussion as to the causation of these malformations in which the question of heredity is dealt with.

Bertram C. A. Windle, M.D.

Article 319.

OPPENHEIM ON NERVOUS DISEASES DEPENDENT ON SPINAL CONCUSSION—'RAILWAY SPINE.'

An address on the above subject was read by Dr. Oppenheim before the Verein für innere Medicin on Feb. 7, and a debate followed. The full title of the paper is, *How are those Affections of the Nervous System to be regarded which develop after Spinal Concussion, especially from Railway Accidents?* The author is Assistant Physician in the Nervous Diseases Department of the Charité Hospital, also Privat-Docent, and the following is a summary of the address and debate (*Berliner Klin. Wochensch.*, No. 9, 1888).

Erichsen has given the symptomatology in its main features, but at that time all the attention of observers was directed to the spinal cord; hence the term 'railway spine.' Since then cerebral symptoms have come into the foreground, and we have now the 'railway brain'; in other words, the old 'traumatic meningo-myelitis' has been changed to 'traumatic hysteria.' The author would substitute for all this a new nosological conception.

Certain symptoms are common to all, or at least the majority of cases of nervous disease consequent on spinal concussion without external injury. These symptoms are chiefly psychic, and belong to the affections, mental depression and irritability occupying the foreground. The mental depression is accompanied by anxiety of mind, the patient's thoughts being always occupied, even in his dreams, with the accident, but is distinguished from pure melancholia both by the abnormal irritability always present, even in persons previously remarkable for their phlegmatic indifference to external excitations, and by its hypochondriacal character. Severe intellectual disturbance is rare, but the author has seen a considerable degree of dementia with weakness of memory, also cases of hallucination, and even of traumatic insanity requiring seclusion. Giddiness and cramps, varying between 'petit mal' and true epilepsy, are not unfrequent; but care must be exercised in diagnosing such from purely hysterical attacks.

In the domain of the special senses, a mixture of hyperæsthesia and anæsthesia, or rather their juxtaposition, is the most frequent characteristic—*e.g.* hyperæsthetic zones are found within anæsthetic cutaneous areas; acuteness of vision is lowered, while the eye is extremely sensitive to light; the auditive faculty is lessened on the whole, while certain sounds react abnormally. Sensory anæsthesia is a very important subject, and observations have been made in Westphal's clinic with a view to distinguish genuine from simulated symptoms. The anæsthesia, *e.g.* of an extremity, does not usually follow the course of the nerve implicated, but is spread over neighbouring nerves, and is often overlooked. Typical girdle-feeling, and a corresponding anæsthetic zone, are rare. Pains are frequent, and usually of the dull kind, especially headaches. Reflex-excitability is more often lessened than increased. The tendons always react. Motility is almost always affected, the patients move about slowly and without energy, the spine is maintained as fixed as possible; sometimes reflex muscular symptoms hinder locomotion. The various ways of walking are remarkable, and may excite suspicion of simulation. There is no doubt that the usual signs here do not, as a rule, correspond with those dependent on 'material diseases' of the central nervous system. Where one foot drags, it is not carried as in hemiplegia. Tremor is frequent, but it resembles that of hysteria far more than that of sclerosis. Swaying on closure of the eyes is very frequent.

As to the motor cerebral nerves, the speech suffers most. There is no trace of aphasia here, or simple disturbance of articulation, or the speech of bulbar paralysis, or a scanning speech, but there are

peculiar anomalies varying in the same patient, who may speak at one time slowly and forgetfully, then impetuously. Interruptions of the speech by frequent respiration and acts of swallowing are common.

The vascular system is often influenced; this has been too usually overlooked. There is nervous palpitation and a sense of distress: the pulse is much quickened, and may reach 160, especially after any slight excitation; the heart beats strongly, and dilatation and hypertrophy may soon result, without any valvular lesion. There is increased irritability of the cardiac nervous system.

The general nutrition often suffers. Anorexia and constipation may be complained of, and (frequently) impotence.

The symptoms which follow are rarer than the above—viz., vomiting, thirst, polyuria, a rise of temperature (rigors and fever were only observed twice). Bladder disturbance is more frequent, the patient having difficulty in passing urine, and the catheter may even be required. A difference between the pupils is frequent, so is slowness of pupillary reaction to light; but reflex rigidity of the pupils was only seen in five cases. In two cases optic atrophy existed.

The above enumeration is enough to show the difficulty of classification of these symptoms. Erichsen's view that a meningo myelitis was set up in 'railway-spine' cases was for a long time generally accepted. Leyden and Erb concurred in it, though they paid more attention to 'shock' than Erichsen. Bernhardt took the same view, and Westphal compared some cases to disseminated sclerosis. The psychical anomalies were strangely neglected, even after the doctrine of 'traumatic insanity' sprang up. Rigler only went so far as to give a special name to one particular frame of mind—'siderodromophobie' (railway dread). Moeli, in 1881, first rejected the term 'railway spine' as insufficient to designate such psychoses as those enumerated; also Walton and Putnam warmly contended that the brain, not the spine, was chiefly affected.

The modern or French view of Charcot and his disciples is that in all such cases there is hysteria and nothing else. The anæsthesiæ were of the kind so common in hysteria. Moreover, hysterical paralysis could be easily induced by hypnosis, exactly like that so common after accidents. Charcot's observations on neuralgia, hysteria, and psychic paralysis are extremely valuable, but his theory is too absolute. The symptoms after railway and similar accidents are not pure psychoses nor pure neuroses, but a 'symptom-complex' of the elements of these variously mingled. The essential symptoms indicate a cerebral basis, though it is not denied that a local spinal injury may form the starting-point (reflex-neurosis). The term 'railway spine' must be rejected for the majority of cases. This term must not be replaced by the narrow conception 'traumatic hysteria,' or, as Page would have it, 'traumatic neurasthenia,' but by the term 'traumatic neurosis' (railway accident neurosis), or 'traumatic neuropsychosis.' Of course, such symptoms as severe bladder disturbances, reflex pupil-rigidity, and especially optic atrophy, are not to be regarded as purely functional nervous affections; but these symptoms are not common.

It cannot be denied that mere fright, 'psychic shock,' has set up the various psychoses in many cases, but then there are undoubted observations of disseminated sclerosis due to shock. On the other hand, the bodily shaking must go for something in the causation of the symptoms.

'It is consistent with my view of railway accident cases,' says the author, 'that they always get worse while any legal suits are pending, but improve to a certain extent at once when these are ended, though Rigler argued that this was a proof of simulation. Can we wonder that anxiety about the means of living, and fear of want and degradation, act detrimentally on such morbid psychic conditions?' Even when substantial damages are accorded, the cases which the author was able to follow, never got well. The prognosis '*quoad sanationem*' is unfavourable. Most of the author's patients were hospital patients, and very few were previously 'nervous.' Alcoholic subjects may be difficult to diagnose, because alcohol may profoundly disturb the nervous system.

Long observation of railway cases, preferably in hospital, is necessary before a sound judgment can be made, and simulation eliminated, but the author states that, in the cases he has been able to follow up, he had never been deceived on this point. Finally, the above-enumerated symptoms have been repeatedly observed after other than railway accidents, when compensation has never entered into the question.

At the conclusion of the paper, Herr Bernhardt showed a patient whose case he had written about eleven years ago; there were various psychic disorders and derangement of speech still; and said that Leyden described a case in 1878 where, after death, a peripachymeningeal tumour, 'traumatic tuberculosis,' was found in the vertebral canal of a man who had been regarded as an impostor during life, but no doubt a great many cases belonged to Charcot's 'hysteria in the male.' Herr Leyden also agreed in the main with the author, who observed in reply, that the term 'neurosis' comprehended 'hysteria.'

E. J. Edwardes, M.D.

Article 320.

GRUSS ON A CASE OF DEXTROCARDIA.

At a meeting of the Vienna Medical Society, reported in the *Deutsche med. Zeitung*, No. 11, 1888, Dr. Gruss introduced a young woman, 30 years of age, at whose birth, which took place two months before the expected time, it was at once noticed that the heart-beat was on the right side of the thorax. Her mother had died of tuberculosis in her twenty-fifth year, and her father of apoplexy. Her brothers were healthy. As a child she had chicken-pox and measles, and in her fourteenth year an attack of peritonitis. Since then she had been healthy. When 18 months old she began to walk, but was so small that she could be put into her mother's stocking. There was no rachitis. Her complexion was of a bluish-red colour, which, however, faded somewhat when she grew older, and now only assumes that hue when she is excited. Up to her twentieth year she suffered from shortness of breath and headache, and had difficulty in keeping warm. Bleeding at the nose was also frequent, and in the last year this has recurred about ten times. Menses began in her fifteenth year. She was never able to sleep on her right side. Her build is slender; pulse 75 to 82; temperature under 37° C., in the forenoon from 36°·5

to 36°·6 C. The measurement of the thorax at the armpits is 75 centimètres. Over the whole of the right half of the thorax the pulmonic sound is full, without disturbance at any part. The apex impulse is found under the border of the fourth rib, 1 centimètre outwards from the right mammillary line. When she lies on her back, the apex impulse is weaker, and in the third intercostal space there are systolic heavings. At the level of the second rib are heard a systolic murmur and a clear, sharp diastolic sound. The carotids are of small calibre; up to the middle of the neck the systolic murmur is heard in the right carotid, and louder still in the left. Gruss thinks that also the small arteries are of small calibre; they have a weak pulse, which, however, does not limp after the heart contractions. The positions of liver, spleen, and stomach are normal. This is, therefore, not a case of 'situs inversus,' but of transposition of the heart only, *i.e.* a simple dextrocardia. The question arises, whether the vessels are transposed or not; and in connection with this, whether the systolic murmur is referable to the aorta or the pulmonary artery. Probably we have to do here with a congenital rather than an acquired anomaly. Now experience teaches that congenital stenosis of the pulmonary orifice is of more frequent occurrence than that of the aortic. Certainly the weak pulse speaks in favour of aortic stenosis, but it may also be explained by the abnormal narrowness of the palpable vessels. Transposition of the vessels is indicated by the fact that the murmur is louder in the left carotid. Gruss's final decision is that it is a case of dextrocardia without situs viscerum inversus, with congenital stenosis of the pulmonary orifice.

In the discussion that followed, Dr. Bamberger said it would be most natural to assume stenosis of the conus of the aorta, the reasons being (1) the weak pulse (though he could afterwards give another possible explanation of this), and (2) the fact that the murmur was plainly heard in the carotid artery (though, again, an obvious objection to this is that the murmur is not distinct in the femoral artery). Considering that the pulmonary and the aorta lie one above the other, it is conceivable that a murmur arising in the one vessel may be communicated to the other; therefore the murmur in question may arise in the pulmonary. The fact, however, that, while the pulse is weak, the second sound is sharp and clear, makes it appear certain that a stenosis of the pulmonary orifice exists, for this accentuated sound is the sign of an increase of pressure, incompatible with aortic stenosis. In this case Botalli's duct is evidently open, and, in consequence of the increased pressure, a portion of the blood escapes from the aorta into the duct, and the pulmonary becomes fuller and dilates. Thus it happens that the second sound is stronger in spite of the existing stenosis. It is this circumstance, also, that explains the weak pulse, in as far as a portion of the aortal blood flows into the duct. This view is supported by the fact that the general health of the patient has improved since her first year of life. The duct has widened; the collateral circulation has developed; the lungs are better filled. Transposition of the vessels may be of such a kind that the veins have a normal origin, while the aorta arises from the right ventricle and the pulmonary from the left. Such a condition has never been diagnosed in the living individual, because it renders life impossible; for in such a case the right side of the heart would receive the venous blood and propel it through the aorta into the system while the left side would receive arterial blood and return it to the lungs—an utter impossibility. But if in such a case the venous vessels were also transposed, no disturbance would ensue. Neither of these conditions obtains here; for the patient is alive, and disturbances do exist. Dr. Bamberger afterwards added that in this case the foramen ovale must also be open, as otherwise there would be very high pressure in the right ventricle with hypertrophy of the latter, which was not the case. Dr. Kundrat observed that transpositio cordis designated that condition in which the right heart lay on the left side, and *vice versâ*, as we find in transpositio viscerum totalis. Dextrocardia also occurs in double monsters, and in otherwise normal individuals, always, however, accompanied by vascular anomalies, often of a serious nature. Transposition of the vessels means a reversed relation of the position of the vessels. Such a departure from the normal is possible, and by no means entails the death of the individual; for the anomaly may be corrected by a change in the position of the cardiac septum, so that still the aorta originates in the left, and the pulmonalis in the right ventricle. This, he calls, 'corrected transposition.'

JOHN ELLIOTT.

ARTICLE 321.

LEWIN ON HAYA.*

DR. LOUIS LEWIN, Professor of Materia Medica at the University of Berlin, obtained last year from Messrs. Thomas Christy & Co., of London, an amorphous substance called 'Haya,' of the origin and purpose of which he had no information. He only knew that it came from Africa. This substance consisted of two different kinds of pieces, of which some were formless, and the others somewhat shaped. The outer surface of the latter was convex, the other side flat and slightly grooved, with some oxide of iron adhering to the furrows, from which he concluded that they may have been attached to arrow-heads. All these fragments readily dissolved in water, one kind of them giving a dark-brown, the other a yellowish-brown colour. Both these solutions were slightly opalescent, of alkaline reaction, and gave with several alkaloid-reagents precipitates. He further found, besides the alkaloid, a glycoside. Alcohol dissolved the active principle.

Calling to mind a poison found in Africa, particularly in the North-West, which, when introduced into the body, deprives men of consciousness and sensation, and another poison in the East on the Lake of Nyassa, which renders the tongue rigid, he made experiments with the Haya on animals in order to find whether this too might produce anæsthesia, which anticipation was fully realised. The solution, introduced into the eye of the animals, caused, after fifteen to twenty minutes, complete anæsthesia, keeping on from ten to twenty-four hours. The animals during this time behaved normally, the cornea remained clear and transparent, but the eye was absolutely insensible to injury.

Further experiments showed, after subcutaneous injection of the solution into frogs, decrease of the frequency of the pulse, which sank, *e.g.* from thirty

* *Der Fortschritt*, No. 9, Feb. 5, 1888; and *Deutsche med. Zeitung*, 1888, p. 68.

to eight beats in the minute. Later on, paralysis followed, and, in warm-blooded animals, great debility, dyspnœa, dropping of the head to the ground, and from time to time a spasmodic wave was observed, which starting from the eye continued along the abdomen to the point of the tail, whilst the extremities were only passively affected. Violent vomiting in every case took place immediately after the injection in animals which can bring up the contents of the stomach, as pigeons.

This poison reminded Professor Lewin of another kind of arrow poison, the Cuabaïo; and this again of a substance with which he experimented thirteen years ago, viz., the Erythrophlæum judiciale, which at the west coast of Africa is used as an arrow poison, and also in ordeals.* He moreover found, whilst dissolving the Haya poison, several minute fragments, of about half the size of a pin's head, of a bark which seemed closely to resemble those of the Erythrophlæum. Comparison with preparations in the Botanical Museum at Berlin, and with specimens in his own collection, confirmed his view that these fragments were really derived from the Erythrophlæum judiciale.

The first experiments already made by Professor Lewin with a decoction of the bark and with the active principle of the bark, the *Erythophlæinum hydrochloricum*, forwarded to him by Merk, fully confirmed his former conclusions, that the action of erythrophlæïn on the eye is identical with that of the Haya poison. Moreover, the test for the Haya poison, discovered by Lewin, is the same as that for erythrophlæïn; both, when heated with concentrated sulphuric acid, turn to a rose-colour.

Professor Lewin produced in guinea-pigs with an injection of ½–1 millegramme of hydrochlorate of erythrophlæïn in a 0·1 per cent. solution, such a high degree of anæsthesia, that the skin at the place of the injection could be incised without causing the slightest manifestation of pain. Even the superficial muscles below the puncture could be divided or pierced with an awl without causing the animal to move. If the doses are too large, the animals die in convulsions. FERD. ADALB. JUNKER, M.D.

ARTICLE 322.

HILDEBRAND ON CANCER OF THE RECTUM.

THE last number of the *Deutsche Zeitschrift für Chirurgie* (Band xxvii., Hefte 3, 4) contains a paper by Dr. Hildebrand, of Göttingen, on cancer of the rectum, based mainly on the statistics of cases that have been under notice in the clinic of Professor König. Cancer of the rectum, it is held, is rarely met with before the age of forty, and occurs much more frequently—in König's cases in the proportion of 47 to 22—in males than in females. In a very large majority of the 69 cases collected by Hildebrand the malignant growth was a cylindrical epithelial cancer: three instances are included of colloid, and three of melanotic cancer. In about one-half of the 69 cases the inguinal glands were affected when the patient first came under notice. Rectal cancer, it is thought, is less malignant than cancer of the breast. In 29 only of 123 cases of the latter affection treated by König were the patients free from glandular affection. The occurrence of secondary growths was noted in ten out of the 69 cases of rectal cancer, in seven of which the liver was the organ thus affected. In bringing his statistics to bear on the subject of operative treatment, Hildebrand finds that he is not in a position to support very warmly the views of most German surgeons as to the beneficial results and the relative safety of extirpation of the disease. The disease was believed to be amenable to treatment in 54 of König's 69 cases. In two cases of cancer of the margin of the anus, not extending to the interior of the rectum, the growth was removed by incision through healthy structures, with partial or total removal of the external sphincter. In thirteen cases in which the cancer had extended from the margin of the anus, or from just above this, to the mucous membrane of the rectum, removal was effected also of the diseased portion of the gut. In the remaining 39 cases in which the cancer was seated at some distance above the anus, the edges of this outlet together with the sphincter remaining free, the latter structures together with the lower part of the rectum were retained, and only the diseased portion of the gut removed. In this last class of cases, a deep incision in the posterior raphè and removal of the coccyx will often be found valuable adjuncts to the operation for extirpation. The latter procedure affords much more room to the surgeon, renders much more accessible the diseased portion of the intestine, and facilitates the extirpation of the growth. Dr. Hildebrand holds, with those surgeons who have had much experience of extirpation of cancer of the rectum, that wounding of the peritoneum does not constitute a serious danger in this operation, provided it be performed according to the antiseptic method. The wound in the peritoneum should, it is held, be at once closed by sutures. The mortality in König's practice has been high, twenty cases out of fifty-seven having had a fatal result, the rate being about 35 per cent. Death was due in four cases to collapse, in no less than ten cases to infection, in two to fatty heart, in one to perforative peritonitis, and in three to unknown causes. The proportion of deaths from infective disorders has been much reduced in the Göttingen surgical clinic during the past six years. In considering the definite results of radical operations on rectal cancer Hildebrand points out that there are few other forms of cancer that present so many cases to surgical observation that are unsuitable for operative treatment. In fifteen out of sixty-nine cases of rectal cancer observed by König the glands were affected at the time that the patients first came under notice. Of the subjects of operation whose subsequent histories Hildebrand has been able to follow, three have lived over three years without relapse, six over two years, and eight over one year; three died without relapse after intervals from the date of operation—two years, nine months, and two months; thirteen died with relapse, and five

* Erythrophlæum judiciale, v. E. guineense, v. Afzelia grandis, of the natural order of the Fabaceæ, is a lofty tree of about 100 feet high, indigenous to Africa south of the tropic of the Cancer. The natives of many parts of West Africa, in Senegambia, on the upper course of the Niger to the mouth of the Congo, in Central and Eastern Africa, in Somali and Mozambique, use the raw juice of this tree, or a potion made of the powdered bark, as an ordeal to detect the guilt of those accused of any crime. The poison is taken in large draughts, and those who merely vomit it and are not further harmed by it are considered innocent; those, on the contrary, who are not sufficiently strong to stand this ordeal, are pronounced guilty, and have to swallow more of the poison, until its fatal effects take place, or are killed in another manner. This tree is therefore called in Sierra Leone the Gre-gre, or Ordeal tree. A similar effect has, and for the like purpose is employed, the fruit of the Ordeal tree, the Cerebera Jaguin, v. C. Ahouai (likely Lewin's Cuabaïo), v. Tanghinia venenifera, in Madagascar, a tree of the natural order of the Apocynaceæ.—REP.

were living but suffering from relapse. In the majority of these cases the functional capacity of the anus was wholly, or almost wholly, abolished, the operation having resulted in incontinence with cicatricial stenosis of the outlet. In some few of the cases of resection of the cancerous portion of the intestine with preservation of the sphincter, the patients for some period after the operation were able to retain their fæces, but, sooner or later, all suffered from incontinence or stenosis. The occurrence of incontinence, even in cases in which the anus has not been removed, is attributed to the division of this sphincter in the posterior median incision, and to the usual practice of treating this wound as an open one, and packing it with some form of gauze dressing. Cicatricial stenosis is a very frequent result of extirpation of rectal carcinoma, especially after any difficulty in bringing together the upper and lower margins of the solution of continuity in the gut. From the above statistics Hildebrand draws the conclusions that the mortality of the radical treatment of rectal cancer is high, that the operation seldom results in a definite cure, and that the subsequent condition is often a wretched one, in consequence of the loss of function of the rectum and anus. In cases of extensive rectal cancer that has contracted adhesions to neighbouring organs, inguinal colotomy, with subsequent scraping away of the cancerous growth, is recommended as the most suitable treatment. The discharge of fæces is thus rendered free from pain, the growth of the cancer is checked, and cachexia, which is due in part to the absorption of the discharge from the irritated cancerous ulcer, is much diminished. W. JOHNSON SMITH.

ARTICLE 323.

ECCLES ON THE TREATMENT OF SLEEPLESSNESS.

IN the *Practitioner*, March 1888, p. 161, Mr. Symons Eccles, M.B., contributes a paper on the subject of the employment of massage in the treatment of insomnia. The author first explains the manner in which a hot bath, taken immediately before going to bed, often relieves wakefulness. In order to obtain any benefit from this treatment, certain precautions must be adhered to, or it will not produce sleep. The bath-room must be heated to about 70° F., then the patient must be stripped in the bath-room, the head and face first being rapidly douched with water at 100° F. By this means the body is cooled, whilst a rush of blood is sent to the head. Then the whole body, excluding the head and face, is immersed in the bath at 98° F., rapidly raised to 105° or 110° F. In about eight to fifteen minutes the patient feels a sensation of pleasant languor, when he must be wrapped in warm blankets, and proceed to the bedroom with as little personal effort as possible. By the time the bedroom is reached the moisture on the surface of the body will have been absorbed; the patient must then put on his night-clothes and get into bed, lying with the head raised, hot bottles to the feet, and well covered with bed-clothes. No conversation or moving about the room should be allowed, and all light must be excluded. In a few minutes the patient will be found in a quiet, refreshing sleep. The theory of this method is based on the sudden exposure of the body contracting the arterioles of the skin, causing thereby a corresponding dilatation of the vessels of internal organs, which in the case of the brain is further induced by the application of hot sponging. The immersion of the whole body next causes a dilatation of the vessels of the surface, except the head and face, with contraction of the vessels of the brain and gradual slowing of the heart's action, thus placing the brain in the most favourable condition for complete functional rest. There are certain conditions, however, in which this method is contra-indicated. Persons suffering from extreme anæmia, or emaciation, or from aortic valvular disease, or in whom signs of atheroma are recognised, should not be subjected to such rapid variations of local arterial tension as this process entails. The author treated two cases of aortic regurgitation, in which the patients suffered from insomnia, by rest, feeding, and massage. The patient should keep the recumbent position all day, and in the evening, about 10 or 11 P.M., a thorough kneading of the trunk and extremities should be performed. Massage of the trunk and extremities is attended by stimulation of the sensory nerves, with inhibition of vaso-motor action in the part undergoing vigorous kneading, the vessels dilate, and the force and rate of the circulation is increased, thus causing a vascular dilatation over a large area, accompanied by a corresponding contraction of other parts, especially of the brain. In order to maintain the effect of the massage on the vessels of the abdomen, a hot abdominal compress is used in some cases where sleep does not follow soon after the massage. In persons suffering from the ill-effects of prolonged overwork, mental distress, morphine habit, chloral drinking, and such like conditions, the evening kneading often causes excitement instead of repose, and if done at all it must be done at an early hour. These cases are extremely difficult to treat, and it is often necessary to administer the wet-pack. To effect the permanent restoration of refreshing sleep, in addition to the above methods of treatment, it is necessary to give the brain perfect rest for some time, the stomach must be coaxed back to a regular performance of its duties, while the muscular system must be called upon to fulfil its digestive and excrementitious functions. Under the combined influence of the recumbent position in a quiet room, away from the cares of domestic, social, or business life, carefully modified diet, and massage—applied as a therapeutical agent, not without regard to the mode, duration, and extent of its administration—the methods of treatment referred to above may be carried out with the best results in the majority of cases. RICHARD NEALE, M.D.

ARTICLE 324.

MARANDON DE MONTYEL ON VARYING WEIGHTS OF THE CEREBRAL HEMISPHERES.

IN the *Annales Médico-Psychologiques* for November 1887, Dr. Marandon de Montyel considers some questions which one might have thought would be no longer in doubt. In 1881 Dr. Luys pointed out that in the insane the right hemisphere weighed heavier than the left. This has been confirmed by other observers, especially by Drs. Morselli and

Seppilli. The superiority of the weight of the right side of the brain is not invariable, but in a majority of weighings this excess is clearly proved. Thus in 133 brains Morselli found the hemispheres equal in 13, *i.e.* 8 per cent.; in 70 brains the right hemispheres were heavier—52 per cent. The left side was heavier in 50, or 37 per cent. In Seppilli's observations on 390 brains the right hemispheres were heavier in 45 per cent.; the left in 40 per cent.; and both hemispheres were equal in 14 per cent.

In the weighings of Dr. Marandon de Montyel at the asylum of Dijon he found the right hemisphere heavier in 40 per cent.; the left in 36 per cent.; and both equal in 24 per cent. To divide the two hemispheres without deviating either to the right or left, so as to allow a little extra to either side, requires a steady and dexterous hand. The differences noted run between 2 and 65 grammes; most of them are above 10 grammes.

Thus the observations of Luys, Morselli, Seppilli, Marandon de Montyel, as well as those of Crichton Browne, Bra, and Crochley Clapham, all go to support the general statement that inequality of the weight of the hemispheres is the rule, equality the exception, and that with the insane the right hemisphere is the heavier. This holds good with both sexes. Dr. Marandon de Montyel noted that out of 94 brains of general paralytics the left hemisphere was heavier by 65 per cent. This preponderance of the left hemisphere in general paralytics was not noticed by Morselli, who found that the right hemisphere was heaviest in fifteen out of twenty-six cases of general paralysis whose brains were weighed. The greatest inequalities in the weight of the different hemispheres were noticed in the brains of paralytics, idiots, and epileptics. Luys considered this inequality of the hemispheres to be the cause of mental derangement, as it produced 'a rupture of the equilibrium of the nervous currents.' Marandon de Montyel thought that the unequal weight of the hemispheres might be the result of long-continued insanity, as the hemisphere which was the seat of the most active delirium might be expected to exhaust itself soonest and to become atrophied. It is needless to discuss which of these speculations is the most ingenious, for they were both founded upon the assumption that in normal human beings the left hemisphere weighs the heaviest, and this apparently is a mistake.

On comparing the weighings of seven observers given in detail in the *Annales* we find that, out of 754 brains of sane people, the lobes were found to be equal 85 times—that is, 11 per cent.—the right side is heaviest 389 times—50 per cent.—the left side 280 times—38 per cent.—giving a difference of 11 per cent. in favour of the right hemisphere. Thus Morselli is justified in saying that, contrary to the assertion of Luys, the right hemisphere, on the average, weighs more than the left hemisphere, both with the sane and the insane. He adds that insanity tends to increase the difference of weight in the two hemispheres, especially in favour of the right hemisphere, both with the sane and the insane. That the left hemisphere weighed more than the right was an assumption based upon the belief of its superior functional activity, the left brain moving the right arm, and being the seat of the most active speech centre.

Above ten years ago Dr. Grieve, the superintendent of an asylum at British Guiana, stated that he had found the right hemisphere heaviest in the brains of negroes; which, he observed, was singular, as negroes are very rarely left-handed. W. W. Ireland, M.D.

Article 325.

D'ABUNDO ON GENERAL PARALYSIS OF THE INSANE.*

In this work of seventy-five pages the author takes up more especially the 'gait' and the condition of the reflexes, and compares them with the lesions found in the sciatic nerve and in the spinal cord. It is based on the study of 103 cases, with 48 autopsies, chiefly in the asylum at Naples, and partly in the Psychological Institute at Pisa.

For a long time general paralysis of the insane was a closed book except to the specialist in mental diseases, but it is gradually becoming recognised that in ordinary medical practice cases of general paralysis in the first stage are not infrequently met with. The physical condition, too, is now receiving some of the attention which at one time was almost entirely concentrated on the mental alienation. Dr. Savage, among others, has done much to show the not infrequent association of locomotor ataxia with general paralysis. Some have noticed the occasional commencement of general paralysis in a definite affection of the cord long before there is any sign of mental aberration; whilst others have gone so far as to suggest that general paralysis always commences in the cord.

In studying the gait of general paralytics, Dr. D'Abundo has formed three classes :—A, 'cerebral ataxic'; B, 'spinal ataxic'; C, 'indeterminate.'

The first class is the most numerous, and included about 79 of the 103 cases. On making such a patient stand up, it is noticed that, besides fibrillary twitching, individual muscles contract irregularly, producing unsteadiness, and soon he has to keep the feet widely separated to obtain a more extended basis and avoid falling. When told to walk he proceeds cautiously, as if he had to overcome a certain resistance of his muscles; he cannot keep a straight line, often places the feet on the ground with much more force than necessary, and keeps the arms stiffly separated from the body. Turning round is difficult, and often results in a fall. As he goes on he tends to walk more and more rapidly. He walks backwards with much difficulty, leans more and more backwards, increases his speed, but eventually falls if not supported. Walking sideways is also accomplished imperfectly and with much difficulty.

The reflexes are generally much exaggerated. Frequently a tap on the ligamentum patellæ produces not only a vigorous movement of the leg, but a general commotion of the whole body. In some of these cases the author was able to obtain the 'foot phenomenon,' which is known as 'spinal epilepsy.'

As a rule, the reflexes were exaggerated on both sides; occasionally they were found normal on one side and increased on the other; but in three cases the knee-jerk was abolished on one side, though greatly exaggerated on the other.

Sensation to pain was almost always found to be increased, except where the knee-jerk was absent; and then sensibility to pain was diminished on the

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* *Paralisi Generale Progressiva: l'Andatura (Cammino) ed i riflessi rotulei studiati in rapporto colle lesioni degli sciatici e della midolla spinale.* Pel Dott. Giuseppe D'Abundo, aiuto di Clinica Psichiatrica e di Medicina Legale nella R. Università di Pisa. Napoli: Nicola Jovene & Co. 1888.

side on which the knee-jerk was lost, though present or exaggerated on the other side. The mental condition rendered any exact determination of tactile sensibility almost impossible.

In some instances early, and in most sooner or later, walking is rendered difficult by the on-coming of muscular rigidity, which eventually prevents all locomotion. Usually the flexors prevail over the extensors, and the patient becomes 'curled up' with the knee and hip-joints fully flexed. Occasionally the rigidity of the extensors prevails and the body becomes so stiff that the patient cannot be placed in a chair but has to lie in bed.

In Class B, those showing symptoms of spinal ataxia, the author was only able to place four of the 103 cases, which, by the way, were all males. The symptoms were indistinguishable from ordinary locomotor ataxia, except that they were constantly associated with the mental condition special to general paralysis of the insane, and usually with a certain amount of spastic rigidity. The optic atrophy, too, proceeded generally to a greater degree than is usual in locomotor ataxia, leading in most of the cases to blindness.

The remaining cases were placed in Class C, and their chief characteristics were as follows :—They could stand steadily even with the eyes closed, but were more unsteady than normal when standing on one leg. There was some indecision in walking, more especially in turning round, and the steps were slow and measured. The muscular rigidity, so constant in Class A, was absent. The reflexes were either normal, or weakened, or absent, never exaggerated; sometimes they were delayed, and occasionally after being absent for some days they would return. Some of the cases in this group that were watched for a year or two eventually showed exaggeration of the reflexes, muscular rigidity, and all the symptoms of the 'cerebral ataxic' form.

As regards the pathological anatomy, the naked-eye changes were the following :—The spinal dura mater was generally hyperæmic, occasionally thickened and adherent to the pia mater, which was often opaque and thickened. The cord was frequently somewhat wasted, and generally firm and elastic.

On microscopic examination vascular changes were constantly found, with but very few exceptions. These changes affected the small arteries and the capillaries, and consisted in periarteritis and endarteritis, and resulted frequently in narrowing of the lumen of the vessels, and occasionally in complete obstruction. Changes in the neuroglia were constant, both in the grey matter and in the white; and in the latter the processes of pia mater which project into the columns were much thickened. The corpuscular elements of the neuroglia were greatly increased in number. Usually the proliferation of the neuroglia was greater in the lateral columns, especially in the region of the crossed pyramidal tracts; but the hyperplasia extended to the posterior columns also in most cases—in fact, none of the columns were quite free from change.

The nerve-fibres, where the neuroglia was abundant, presented varying degrees of change, from simple wasting to complete atrophy. These changes, as a rule, were always more advanced in the lateral columns, where the appearances were those of a system lesion.

The nerve-cells were usually more or less degenerated. The alteration was generally a fatty metamorphosis; sometimes vacuolation was observed. The central canal of the ependyma was always found obliterated.

Coming next to the great sciatic nerves, the naked-eye changes were some wasting, with an oval section instead of round. Microscopically the same vascular changes were found as in the cord, and they were especially marked in the perineurium and in the endoneurium. The connective tissue was greatly increased, and formed a very firm, coarse meshwork, the principal fibres of which clearly started from the perineurium. There was an abundant proliferation of corpuscular elements, especially about the endoneurium. The nerve-fibres were wasted where the connective-tissue proliferation was marked. The white substance of Schwann was broken up, and the axis cylinders remained. Where the proliferation of the endoneurium was most extensive the wasting of the nerve-fibres was quite evident, even with low magnifying powers. In some sections scarcely any healthy nerve-fibres were to be seen.

In three cases, however, no increase of the connective tissue could be detected. The pathological change consisted in an atrophy of the nerve-tubes, which were both smaller in diameter and fewer in number than normal.

As a rule, the tibial and peroneal nerves were affected in a similar way; but, on the contrary, the nerves of the upper limb presented no appreciable change.

In a few instances no changes in the nerves, whether parenchymatous or interstitial, could be detected.

The author concludes, therefore, that as regards the pathological anatomy we have to do with a chronic inflammatory process, which manifests itself as a myelitis of most varying degrees of intensity; and as a neuritis, usually interstitial, but occasionally parenchymatous; and that in a few cases no changes can be found.

With regard to the distribution of these changes among the three classes of cases already mentioned, in the cerebral ataxic form (A) sclerosis of the lateral columns prevails, and the neuritis is chiefly interstitial, the atrophy of the nerve elements appearing to be secondary to the interstitial increase. In the spinal ataxic form (B) the sclerosis is most advanced in the posterior columns, and the neuritis is of the parenchymatous form; and in the third class (C) there was usually general atrophy of the cord, but no lesions like those in Classes A and B. In the brain there were the usual changes, but not in a marked degree; and in the sciatics no change at all. To a large extent this class appears to be only an earlier stage of the other two, and perhaps for this reason there were very few autopsies—only two out of twenty cases.

The author concludes by speaking of the diagnosis in those cases of general paralysis where the spinal symptoms precede the mental. The chief difficulty is in the class of 'cerebral ataxic' cases. The reflexes are also increased in primary lateral sclerosis, in hemiplegia, in disseminated sclerosis, chronic myelitis, hysterical contracture, and in spastic infantile paralysis. The diagnosis must be made on general grounds. Where muscular rigidity is marked, the diagnosis from primary lateral sclerosis may be for a time very difficult. With regard to the lateral sclerosis in general paralysis the author considers that it is a primary lesion, and not a descending

degeneration following upon antecedent cerebral lesions. The neuritis also appears to be a primary lesion, and usually develops at an advanced period of the disease.

Coming to the next group, the spinal ataxic form (B), the author considers that the ataxia of general paralysis is distinct from locomotor ataxia, and distinguishable from it by the following characteristics, even before any mental change has been observed. The amblyopia is generally more intense, and often proceeds to blindness. Squinting and other oculomotor changes are absent. *The muscular power is considerably diminished*, whereas in locomotor ataxia it is preserved for a long time. There is a certain degree of muscular rigidity, both in the upper and lower limbs, which is generally wanting in locomotor ataxia. The presence, too, of muscular tremor is in favour of general paralysis.

And, lastly, the author discusses the influence of syphilis in the causation of general paralysis. Sandberg, Steenberg, and Iepersen are of opinion that syphilis is the most frequent cause of general paralysis. Kjelberg goes still further in saying that general paralysis is never found in an organism perfectly free from syphilis. Preuss is of the same opinion. Mendel states that from a very large experience he has found syphilis in 76 per cent. of cases of general paralysis, but only in 18 per cent. of other cases of mental disease. Dietz found that in 54 out of 88 cases there was antecedent syphilis. The author in his 103 cases found previous syphilitic infection certain in 38, doubtful in 34, and absent in 31. He considers that general paralysis is by no means a direct result of syphilis, but that the degenerations in the nervous system essential to the disease take place more readily when the tissues have been previously injured by syphilis. He thinks that this view is borne out by the fact that in the 48 autopsies no syphilitic lesion was found in any of the organs. And, further, he says that he is in a position to state that Professor Armanni, who has made hundreds of autopsies in cases of general paralysis in the Naples Asylum, has never found distinct syphilitic lesions in the bones, nervous system, viscera, &c.

Moreover, the total inefficacy of antisyphilitic treatment still further confirms this view.

H. Handford, M.D.

Article 326.

BRAMANN ON PROFESSOR VON BERGMANN'S ANTISEPTIC TREATMENT.

Dr. F. Bramann, first assistant surgeon to the Surgical Clinic of the University of Berlin, reports on the antiseptic treatment adopted by Professor von Bergmann (*Archiv für klinische Chirurgie*, vol. xxxvi., 1887, and *Centralblatt für die gesammte Therapie*, December 1887). Sublimate gauze is prepared by exposing gauze during one quarter or half an hour to a continuous stream of water-vapour of 100° C. (212° F.), after which it is rapidly dried and impregnated with a solution of sublimate. Plain sterilised gauze is but rarely employed, and only in minor operations. The cotton-wool used for dressing is not impregnated, but merely sterilised by steam in the above manner. The waterproof sheets, linen sheets, napkins, towels, and sponges are disinfected in the same way. Small rolled up pieces of sublimate gauze are generally substituted for sponges. The silk for sutures is sterilised; catgut is immersed for from ten to fourteen days in an alcoholic solution of sublimate (4 : 1,000), and afterwards kept in a solution of 1 : 800 of sublimate in alcohol and 200 parts of distilled water, in which the catgut will not become brittle. The wound during the operation is irrigated with sublimated water (1 : 2,000); but in operations in the abdominal or pleural cavity the wound is merely wiped with pieces of sublimate gauze. In the mouth, rectum, and in the bladder, instead of sublimate, salicylic acid (1 : 1,000), boric acid (2 : 100), and at the termination of the operation iodoform ether (1 : 10) are employed.

The instruments are left half an hour before use in a solution of 3 per cent. of carbolic acid. Hæmostasis is most carefully attended to, and the wound is not closed before the slightest trace of bleeding has disappeared, by which precaution the best results even without drainage are achieved; but there are exceptional cases in which the hæmostasis cannot be perfect and the wound cannot be kept free of serious oozing, or in which an aseptic progress is doubtful. In such cases, the wound is irrigated with a 1 : 1,000 sublimate solution, rinsed with iodoform ether, and loosely tamponned with a strip of iodoform gauze, the end of which is brought out in the corner of the wound, and is dressed over the tampon with sublimate gauze and cotton-wool, according to antiseptic rules. Should the dressing become saturated with the discharge of the wound, the external layers are to be renewed, but the iodoform gauze is left for two days, after which it can be easily and safely removed. The wound is now accurately closed by sutures, and union by first intention will take place even in cases in which the tampon had been left, owing to special reasons, for four to six days.

Dr. Bramann refutes the assertion of some surgeons, especially the Danish, that iodoform is devoid of antiseptic properties, being convinced of its undoubted antiseptic value by his extensive experience in Professor von Bergmann's clinic. Of twenty-six patients who, during a period of two years and a half, had been operated on for carcinoma of the rectum, every one made a fair recovery, although in many of these the whole sacral cavity up to the promontory had been cleared, and in some even the peritoneum had been opened. Equally favourable were the results of the operations for tumours in the mouth. Not one of the twenty cases, in some of which not only the tongue but also the greater portion of the floor of the mouth, the tonsils, &c., had been extirpated, ended fatally. Also the dreaded pneumonias from entrance of blood, &c., into the air-passages (*Schluck pneumonie*) did not occur. Of nineteen cases of complete extirpation of superior maxillary bones only one died of this kind of pneumonia. The iodoform tamponnade proved of particular benefit in a case of sarcoma of the orbit in which not only the inferior wall of the orbit and the nasal process, but also a portion of the frontal bone were removed, and, moreover, the dura mater exposed and partially resected, whereby, nevertheless, the brain with its arachnoid investment directly communicated with the nasal cavity, and in which recovery took place. The iodoform tampon in many cases was only temporarily applied. In complicated fractures of the bones with extensive injuries of the soft parts, in intra-articular fractures and in complicated frac-

tures of the skull this method proved most satisfactory. Dr. Bramann communicates a series of interesting cases illustrating this subject.

The greatest proportion of temporary treatment with iodoform tampons and secondary sutures was in tuberculous affections, principally in resections of the joints. Prof. von Bergmann, in tuberculous disease of joints, pursues a conservative treatment as long as possible, and only resorts to operation in cases of high fever, suppuration of the joint with fistulous openings or destruction of the epiphyses. Of thirty-four cases of resection of the hip-joint none succumbed under the operation, and twenty-two were discharged as cured; ten had fistulas at the time of their discharge, one died of acute tuberculosis three months after the operation, the wound having perfectly healed, and in one patient ex-articulation became subsequently necessary. Of twenty-one cases of resection in the knee-joint, sixteen were discharged cured, two with fistulas, and three had relapses and were amputated. The shoulder-joint was resected in three cases, of which two perfectly recovered, and one, a woman, aged 60, died of general tuberculosis. The elbow-joint was resected in eleven cases, with six complete recoveries, four were discharged with fistulas, and one died during the narcosis.

Tuberculous abscesses and abscesses from gravitation ('Sinkung's abscesse') were treated in the same manner. After extensive incisions, if necessary, large portions of the pelvis of the ileum were removed by means of a chisel and the abscess cavity thoroughly emptied and cleared; tamponnade was employed for two to three days; secondary suture and drainage. Of twenty-eight cases, in three only union by first intention failed, but frequent relapses occurred. Complete cures were obtained in eight cases. Although the results in these cases were not quite satisfactory, the wounds during the whole further treatment were kept perfectly aseptic by the iodoform tamponnade.

FERD. ADALB. JUNKER, M.D.

ARTICLE 327.

FÉRÉ ON ANIMAL ELECTRICITY.

M. CHARLES FÉRÉ publishes in the *Compte-rendu des Séances de la Société de Biologie* of Jan. 20, 1888, some interesting remarks on the electricity of the human body. Certain individuals become charged with electricity in dry, cold weather, especially in a hard frost. Sparks, or flashes of light escape, especially from the hair when combed, with a dry, crackling sound. Occasionally this phenomenon appears with much more intensity. Mussey and Hosford record the case of a woman thirty years old, of a very nervous temperament, who, during an aurora borealis, was suddenly charged with electricity, the presence of which was manifested by sparks whenever the woman passed her fingers over the face of her brother. This condition lasted two months and a half.

Other cases have been also observed, but none of such striking interest as the following one which came under the notice of M. Féré several years ago.

Madame X. belongs to a neuropathic family, and amongst other troubles suffered from nervous anorexia since her childhood; she had (at least temporarily) ovarian hyperæsthesia on the left side, and sensitive sensorial anæsthesia on the same side. When she was about fifteen she noticed crepitation in her hair in frosty weather, and in the dark, flashes of light. At the age of twenty-seven this electricity manifested itself with greater intensity. Madame X.'s fingers attracted light bodies, such as fragments of paper; when a fork or any metallic object touched her body, a luminous crepitation was produced; her clothes adhered to her body. The luminous crepitation increases by friction, or by passing a comb repeatedly through her hair. Under the influence of mental emotions the electric tension increases, and, of course, the manifestations. After Madame X. had been listening to music the crepitation was greatly increased, and a disagreeable pricking sensation, especially in the legs, was felt. In 1884, she had an œdematous infiltration in the legs, her skin was so dry that it chapped at the least exposure to cold, even on the parts of the legs not affected by the œdema. M. Féré ordered the patient to wear silk underclothing and powder her skin with lycopodium in order to moderate the electric phenomena; he also prescribed daily baths of static electricity. Since this treatment her general health is better in spite of the persistence of the electrical phenomena. She has a son eleven years of age, who for three years has suffered from nervous anorexia, hysterical symptoms, sensibility of the left testicle, left hemi-anæsthesia and left hemi-amyosthesia, rachidian pains, hyper-æsthesia of the scalp, dysæsthesia in the sole of the foot. For the last few months he has manifested electric phenomena under the same circumstances as his mother.

Examined by the aid of a hygrometer, both presented extreme dryness of the skin, especially on the left side. The electrometer showed that Madame X. produced a slight deviation to the right, which was increased when the left hand was in contact with the apparatus 175 to 100 volts. After friction of the hands, both patients caused a deviation to the right, the mother 650 volts, and the son 500 volts.

Under the influence of peripheral stimulation a deviation to the right (125 volts) was caused by Madame X. when she looked through a blue glass. The deviation reached 700 volts when a flask of ether was held near the patient.

M. Féré thinks that the existence of these electric phenomena may give the key to phenomena of transfer, polarisation, electric sensibility, and certain influences at a distance. W. VIGNAL.

ARTICLE 328.

PAVLOVSKY ON THE ETIOLOGY OF ACUTE PERITONITIS.*

DR. A. D. Pavlovsky, a private lecturer at the St. Petersburg Military Medical Academy, has recently published a preliminary note on his very interesting experimental researches carried out at Professor J. Rosenbach's laboratory in Goettingen, with the object of ascertaining the causation of acute peritonitis as well as various modes of its development. In all, as many as 101 experiments, grouped in ten series, have been made. The main details and results may be briefly given as follows.

I. *Chemical Etiological Agents. First Series: Croton-oil* (twelve experiments).—The action of croton-oil was studied in nine rabbits and three dogs. The

* PAVLOVSKY, DR. A. D.—A Contribution to the Study of the Etiology and Genesis of Acute Peritonitis. (*Russkaia Meditzina*, Nos. 45 and 46, 1887.

oil was injected into the peritoneal cavity in the dose varying from one-tenth of a drop to ten drops. The smallest dose did not produce any symptoms, but larger doses gave rise to acute hæmorrhagic peritonitis, the amount of the effusion varying in proportion to that of the oil injected. The exudation consisted almost wholly of red blood-corpuscles with but a scanty admixture of leucocytes. Cultivation experiments gave negative results. Dr. Pavlovsky lays stress on the fact that croton-oil never produced any suppuration.

Second Series: Trypsin.—Its action was studied (in rabbits) with the object of throwing some light on the part played by intestinal ferments in cases of peritonitis developing after perforations of bowels. When injected into the peritoneal cavity in the dose of half a gramme, trypsin caused hæmorrhagic peritonitis, ending fatally in four or four-and-a-half hours; the doses of one-quarter and one-tenth of a gramme gave rise to the same symptoms, but death ensued somewhat later (in twenty or twenty-four hours). Negative results were observed only when the dose injected did not exceed one-twentieth of a gramme. The hæmorrhagic exudation consisted of red blood-corpuscles with scanty leucocytes. Cultivation experiments (with a portion of the effusion) failed to give any bacterial growth. Here again the writer draws attention to a complete absence of any suppuration, as well as to the fact that trypsin represents an extremely powerful irritant agent.

II. *Microbes as an Etiological Factor.—a. Non-Pathogenic Micro-organisms, Third Series* (four experiments on rabbits, one on a dog).—An agar-agar culture of a micrococcus from human pus (resembling the staphylococcus albus, but growing on jelly without causing its liquefaction) was injected in large amounts, either alone or with 1-30th of a drop of croton-oil. No peritonitis followed. Intraperitoneal injections of the yellow sarcina (alone or with 1-20th of a drop of croton-oil) similarly gave only negative results.

β. Pathogenic Microbes. a. Staphylococcus aureus (forty-one experiments in rabbits), *Fourth Series, St. Aureus alone.*—Even very small quantities of the microbes, when introduced into the peritoneal cavity, gave rise to a violent acute fibrino-purulent peritonitis with a rapid lethal issue. Inoculations of the exudation in agar-agar gave pure cultures of the staphylococcus. At the *post mortem* microscopical examination, the microbes were found in lymphatic slits of the centrum tendineum and parietal peritoneum, as well as in the spleen (in the capsule, trabecules, and peripheral layers of the pulp).

Fifth Series. St. aureus + Oleum Crotonis (in minimal quantity). *Sixth Series. St. aureus + agar-agar. Seventh Series. St. aureus + trypsin* (in minimal quantity). The same results as in the fourth series.

b. Bacillus Pyocyaneus, Eighth Series.—Injections of large quantities (*culturefuls*) of the microbe invariably produced a severe acute fibrino hæmorrhagic peritonitis, ending fatally in twenty-four to forty-eight hours. Smaller doses gave the same results, the animals dying in from twenty-four to seventy-two hours. Only minutest amounts proved harmless. At the *post mortem* microscopical examination, the microbes were found in lymphatic slits of the peritoneum, in the spleen, liver, and kidneys (in the uriniferous tubules and Malpighian bodies).

III. *Intestinal Juice.—a. Juice, Ninth Series.*—Having killed a healthy rabbit, the writer immediately collected its intestinal juice and divided it in three portions, one of which he injected (into the peritoneal cavity) unfiltered, another after being filtered, and the third after being sterilised. The whole of the first group of animals died from fibrino-purulent peritonitis in 24 to 48 hours. The remaining two groups remained alive. At the *post mortem* examination of the animals which had died from the injection of unfiltered intestinal juice, it was found (1) that the clumps of the juice were covered with fibrine, and (2) that the exudation contained large numbers of a 'peculiar motionless short bacillus,' which formed on agar-agar plates 'shining, oily, greyish-white, luxuriant colonies'; when cultivated on jelly its colonies did not liquefy the medium, but grew in the shape of 'nails with raised heads.' Dr. Pavlovsky named this micro-organism a '*bacillus peritonitidis ex intestinis cuniculi.*' To study its biological nature more closely, he carried out a special series of eleven experiments.

b. Bacillus peritonitidis, Tenth Series.—When injected in large amounts, a pure culture of the bacillus gave rise to a general hæmorrhagic peritonitis, the animal dying in twenty to twenty-four hours. When injected in a small quantity, it produced either a fibrino-purulent peritonitis, ending fatally in twenty-four to seventy-two hours, or a pure purulent peritonitis, with a fatal issue in from four to twelve days. In very small amounts the microbe also gave rise to purulent peritonitis (now of a hæmorrhagic, and then of a fibrinous, variety), but the animals sometimes recovered. The cultivation experiments (with the exudation) gave pure cultures of the bacillus. The *post mortem* microscopical examination revealed its presence in various organs in every one of the fatal cases. From the last two series of his experiments the author draws the conclusion that 'the bacillus peritonitidis undoubtedly stands in a close etiological connection with an acute peritonitis developing in consequence of penetration of the intestinal contents into the peritoneal cavity.'

Discussing various morbid forms under which acute peritonitis occurred in his experiments, Dr. Pavlovsky points out 1, that the inflammation caused by chemical agents was always of a hæmorrhagic variety; 2, that in infectious cases the inflammation appeared either as *a*, mycotic peritonitis, which was caused by infection of severest degrees, death ensuing before any reactive changes in the peritoneum could take place; or *b*, as a hæmorrhagic peritonitis, which was observed similarly in more severe cases, while infection of milder degrees gave rise to *c*, a fibrino-purulent, and *d*, a typical pure purulent peritonitis. The latter seemingly occurred in the relatively mildest cases, where the animals died at some more or less remote period.

In many cases of fatal acute peritonitis there were present a considerable enlargement of the spleen, and a liquid serous exudation in the pleura.

V. Idelson, M.D.

Erythrophlæin.—At a recent meeting of the Paris Académie de Médecine M. Panas made a communication concerning erythrophlæin. He considers it inferior to cucaine as an anæsthetic agent in ophthalmology, and he condemns it in consequence of the irritation and toxic phenomena determined by doses large enough to cause local anæsthesia. A similar report concerning erythrophlæin has been made by Professor Kaposi to the Vienna Medical Academy.

ARTICLE 329.

DIETZ, GÜRTLER, AND AVELLIS ON AMYL HYDRATE.

VON MERING'S amyl hydrate has been introduced in the Leipsic Psychiatric Clinic, the Königsberg Polyclinic, and Professor Riegel's Medical Clinic in Giessen, and has been reported on in various medical journals by Dr. Dietz, Dr. F. Gürtler, and Dr. Avellis (*Deutsche med. Zeitung*, No. 18, 1888). Dr. Dietz, of Leipsic, finds that the drug has a stronger effect than paraldehyde and a weaker one than chloral. No specific hypnotic reaction was observed in particular forms of mental disease; only some hysterico-hypochondriac psychoses reacted better on paraldehyde. Generally amyl hydrate could be given for weeks with good results. In some few cases there occurred a burning sensation in the throat and an inclination to vomit, followed the day after by headache, vertigo, stupor, and sickness. A general complaint, however, was made of a bad taste in the mouth, even by patients accustomed to paraldehyde. To meet this, more syrup was added to the mixture according to Von Mering's advice. There is, however, then the danger of the amyl hydrate rising to the top, on account of its light specific gravity, unless the bottle be well shaken. This actually happened in the Leipsic Clinic. After the new mixture had been successfully given for weeks in doses of from 3·5 to 5·0 grammes as a sleeping draught, one evening something interrupted the nurse on her round, so that though she had shaken the bottle it rested a moment in her hand before she poured out the medicine. This was evidently sufficient to allow the amyl hydrate to rise to the surface again. Four individuals thus received each a dose, viz., a hysterical patient, another with primary chronic paranoia, a third with chronic mania, and the fourth an excited paralytic woman. The first three are said to have received 5 grammes each, and the fourth 3·5 grammes. All four, it struck the nurse, slept remarkably soundly. The next morning they could not be roused; the extremities were paralysed; sensibility and reflex actions were completely in abeyance; respiration was much retarded, being mostly deep, but sometimes superficial and irregular; the pulse was small and from 50 to 60 per minute; the temperature down to 35° C., and in the patient that had taken 3·5 grammes not higher than 36° C. The patients were allowed to sleep, a careful watch being kept, after a subcutaneous injection of camphor. In the second case respiration was for some time so superficial and irregular that recourse was had to artificial respiration for about ten minutes. About midday patients two and four became restless and were made to sit up, but were in a deep stupor, swallowed with difficulty, and at once fell asleep again. All four slept through the following night. On the third day all had recovered from the effects of the overdose and presented the same appearance as they had done prior to it. Dietz describes the reaction as in every respect specifically alcoholic, the melancholy produced in the chronic maniacal patient being decidedly maudlin.

Von Mering has proved that larger doses of the drug affect the spinal cord and the medulla oblongata as well as the cerebrum, and that it most easily causes a paralysis of the respiration. From what he has seen, Dietz cannot agree with Von Mering when he asserts that, as compared with chloral hydrate, amyl hydrate has next to no effect on the action of the heart.

Dr. Gürtler, of Königsberg, has tried the drug in sixty-one cases of the most diverse diseases and ages. To prevent the bad taste in the mouth he altered Von Mering's prescription thus: Amyl hydrate 7·0, aq. destillat. 40·0, syr. rub. idaci 30·0; or, amyl hydr. 7·0, aq. menth. pip. 40·0, ol. menth. pip. gutt. 1·0, syr. rub. idaci 30·0. One-half of either of these mixtures formed a sleeping draught. For safety's sake children received the dose in pills or gelatine capsules, these being stirred into milk or gruel for very young children. The drug was never used for a clyster. The medium dose for adults was 3·5, the maximum 6·0, or once even in the case of an alcoholist 7·0 grammes. Two children, aged under 1 year, received 0·2 gramme per dose, and some above 10 years old had 0·6 gramme per dose. Nearly in every case deep sleep followed soon after the taking of the dose, and generally lasted the whole night, in some few cases, however, only for several hours. Gürtler heard only in a few cases complaints of bad after-effects such as headache, stupor, or vertigo, and never did he find vomiting follow. Nor did he observe any alteration of the pulse or respiration. To produce sleep he used the drug in seven cases of chronic alcoholism, two cases of encephalo-malacia, two cases of morphinism, two cases of epilepsy, seven cases of tuberculosis, two cases of cystitis, two cases of apoplexy, and six cases of chronic gastric catarrh. For violent pains from gastric ulcers, hepatic carcinoma, perityphlitis, and muscular rheumatism he followed Von Mering's recommendation to combine morphia with the amyl hydrate, as well as in a case of tabes dorsalis and chlorosis and two cases of vitium cordis during the stage of compensation disturbance. In whooping-cough the effect was a varying one. He recommends amyl hydrate, especially as he is convinced that it does not injuriously affect the heart.

Dr. Avellis gives the results obtained by the drug in Riegel's Clinic in somatic patients. Both the capsules and a mixture with red wine or with water and some syr. rubi idaci were used. He gives the doses as ranging between 0·8 and 3·2, but generally as being 2·0 or 2·4. Forty patients were thus treated. If there was an indication against introducing the drug by the mouth, the following clyster was given; amyl hydrate 3·0, aq. destill., gumm. arab. āā 25·0. In the latter case the effect was nearly equally rapid, without causing irritation of the intestinal mucous membrane, as is the case with chloral. Amyl hydrate was generally given at 8 or 9 P.M. Sleep followed sometimes immediately, often in from fifteen to forty-five minutes, but with a sufficient dose generally in from five to eight minutes. Some few times there was no effect at all the same night, but a repetition of the dose the next evening produced in some of these cases a sleep of from six to eight hours. Generally speaking, the result was good. The sleep, which is not preceded by any excitement, is more or less sound, and there is no difficulty in rousing the patient. The patient on being awakened is perfectly clear, but if allowed will at once fall asleep again. Neither headache nor depression follows. Respiration, pulse, and blood-pressure are not affected by the drug, nor is there any bad taste or smell. So far the doses did not require to be increased on repetition. The cases thus treated were various gastric and nervous complaints, dis-

turbances of circulation, jaundice, cholelithiasis, chrysarobin dermatitis, diabetes, tuberculosis, emphysema, bronchitis, bronchiectasis, &c. In phthisis the cough irritation was rather alleviated than otherwise. The drug appeared to be especially efficacious in jaundice and icteric pruritus cutaneus. Severe gastric disease and ulcerous processes in the pharynx require the administration of a clyster. It is best to mix what is sufficient for two doses with water only in the proportion of 5 to 50, and to add syr. rub. idaci immediately before giving each dose. The capsules are expensive, and are suitable only for patients with a perfectly healthy stomach.

John Elliott.

Article 330.

WEILL ON CARBONIC ACID INHALATIONS IN THE TREATMENT OF DYSPNŒA.

M. Brown-Séquard's communication to the *Académie des Sciences*, on the results of insufflations of carbonic acid gas, suggested to M. Edmond Weill (*France Médicale*, March 8) that these experiments might be utilised in the treatment of certain forms of dyspnœa. Patients were made to inhale pure carbonic acid through the Limousin apparatus, from which the oxygen reservoir had been withdrawn and replaced by one filled with carbonic acid. The inhalations lasted from two to five minutes, and were repeated once or twice a day. The quantity of carbonic acid used each time varied from two to four litres. No immediate or consecutive ill-effects were observed to result from these inhalations. On the contrary, an instantaneous and marked eupnœic action producing durable effects was noted. The patients under this treatment were generally those affected with tuberculosis, and most of them suffered from laryngitis and advanced lesions of the lungs. Nearly all complained of slight, but continuous, oppression, and from time to time fits of coughing occurred (from four to twenty a day) lasting several minutes, sometimes half an hour, accompanied by cardiac pains and palpitations, the dyspnœa lasting longer than the coughing fits. The latter occurred more frequently at night than in the day time, consequently the patients were compelled to remain in a sitting posture during the greater part of the night, and willingly abstained from taking their evening meal, which had the effect of increasing the dyspnœa. They were made to inhale carbonic acid during both the paroxysms and the relatively calm period which followed. In the first instance the attack was somewhat shortened, the cough ceased, the oppression and palpitations were lessened, the respiration was less laboured, and the patients felt considerably relieved. When the inhalations were made during the calm period the patients breathed more freely, the paroxysms decreased from twelve to four, or even two ; they were shorter, and the evening meal was taken without inconvenience.

Attacks of dyspnœa in emphysematous patients affected with albuminuria were thus treated with the same success, but their number is as yet too small for any conclusion to be drawn from them. With all patients who were made to inhale carbolic acid, a marked suppression of reflex sensibility in both the pharynx and larynx was observed after the inhalation, but no modification of the cutaneous sensibility could be detected.

M. Weill observes that carbonic acid, as an anæsthetic agent, might render the same services to science as cucaine, and would in some cases, such as affections of the larynx, be of more practical use. The decided respiratory effects of inhalations, their simple and easy mode of application, and their innocuousness are well adapted to the treatment of certain forms of dyspnœa, in which their soothing action can be compared to that of a subcutaneous injection of morphia in quieting pain.

W. Vignal.

Article 331.

BRAMWELL ON HYPER-ARTERIAL TENSION.

In the *Edinburgh Medical Journal*, March 1888, p. 812, Dr. Bramwell contributes a study on hyper-arterial tension, a condition which is found associated with a very great variety of diseases, sometimes as an effect, sometimes as a cause, and sometimes as a complication. Blood poisons, either introduced from without, as ergot of rye, or formed in the tissues, as in gout, produce higher arterial tension than normal. In some acute diseases, such as cholera, scarlatina, diphtheria, we find this condition marked, while in typhoid the arterial tension is low ; but when albumen appears in the urine, indicating the presence of intercurrent parenchymatous nephritis, the pulse is transformed into one of hyper-tension. Dr. Galabin has shown that certain specific poisons have an elective affinity for certain organs, producing in one instance low pulse tension, in another high. Hyper-arterial tension is met with more as a physiological than a pathological condition in one or two aspects ; first, in athletes whilst training, the heart is often found in a state of simple hypertrophy, with arterial tension above normal ; and again in pregnancy the same condition is often found, but in both these cases the heart and arterial tension return to their normal standard after the strain is over. The author then goes on to inquire into the causation of this increased arterial tension in some of the following diseases :—Renal affections, acute and chronic atheroma of the vascular system, angina pectoris, diseases of the blood and anæmia, acute diseases. The relation between acute kidney disease and high arterial tension is by most now regarded as cause and effect, except Gull and Sutton. In acute catarrhal nephritis there occurs at once increased blood-pressure, this being brought about by an obstructed condition of the renal circulation, by the pressure of inflammatory exudations, and after a time a third factor comes into play, the blood becomes spanæmic from retained metabolic products, and thus the renal circulation is still further impeded. If this condition be of short duration matters soon return to their normal state ; if otherwise, degenerative changes ensue. In scarlatina when the kidney becomes inflamed, the arterial tension is often very high, there is considerable strain put upon the heart, and if compensatory hypertrophy does not set in, death ensues, either from uræmic convulsions or from cardiac dilatation engendered by intense retrograde strain. All forms of chronic Bright's disease are not associated with high tension, it is rarely met with in amyloid disease. The author then goes on to argue against the arterio-capillary fibrosis theory of Gull and Sutton, who contend that strain is not the causation of these changes, which are degenerative and not

inflammatory. Next the question of angina pectoris is considered. It has been described as 'an agony engendered by ischæmia of the cardiac muscular structure, the blood supply being suddenly cut off, actively or passively, by vascular spasm, and, as a consequence, a paroxysm of angina pectoris ensues; the good results produced by such remedies as amyl nitrite, nitro-glycerine, and sodium nitrite tend to strengthen this view. In the treatment of hyper-arterial tension our remedies must be drawn from the following:—Nitro-glycerine, nitrite of amyl, sodium nitrite, spiritus etheris nitrosi, potassium bromide: purgatives—such as pulv. jalap co.; diaphoretics—as pilocarpine, vapour baths, and warm pack; blood letting, general and local; dietetically, skim or butter-milk in quantity. In a case of simple nephritis from cold, or one produced by a specific poison—such as scarlatina—the very best treatment is abstracting blood in quantity at the onset of increased arterial tension. In some cases of threatened apoplexy, where the patient is the subject of general atheroma, it is sometimes necessary to bleed, but often the administration of a dose of nitro-glycerine will answer the same purpose. In chronic nephritic diseases, when the tension is high, and that in large measure from persistent organic changes in the arteries and heart, the administration of nitro-glycerine is also useful, together with the employment of free purgation and the hot-water pack. As a diuretic much benefit is derived from the use of large quantities of skim milk. In cholera collapse, high arterial tension is best treated by atropine and morphia injected deeply into the tissues. Broadbent has drawn attention to cases of certain individuals in whom there is a tendency to faulty metabolism, culminating now and again in a quasi-angina paroxysm, although there is no existing organic disease; these cases are best treated by venesection, or by giving nitro-glycerine and following up the treatment with careful dieting and attention to hygienic rules. The same author has also pointed out the risk that fat people run of apoplexy when they try to reduce themselves by avoiding hydrocarbons, and living chiefly on lean meat; in these cases the blood becomes loaded with an excess of albuminoid compounds, which lead to heightened arterial tension.

Richard Neale, M.D.

Article 332.

PAUL ON COCAINE AND ITS SALTS.

In a paper read before the Pharmaceutical Society on March 14, Dr. Paul alluded to the lack of constancy and uniformity in the purity and general character of the salts of cocaine. He proceeded to show, by the results of analyses of a number of samples of the hydrochloride, that there were considerable differences between the products of different makers. Two preparations are met with in the market, known commercially as the 'crystallised' and the 'granular' (amorphous). He did not, however, believe that the pure salt ever assumed the amorphous condition. He dissented from Dr. Squibb's view that the difference referred to, was merely a matter of physical condition affecting one and the same chemical substance. His own experience had led him to conclude that the salts presenting this character of different crystallisability were in all cases mixtures in varying proportions of cocaine salt with some other salt or salts of a different nature. So marked is the crystallisability of the pure substances that it may be made the basis of an opinion as to the quality of a given sample. The chloroform test, which depends upon the fact that the amorphous salt is much more soluble in chloroform than the crystallisable portion, does not afford very conclusive results. He declined to ascribe the amorphous condition to the presence of 'hygrin,' of the existence of which he was unable to satisfy himself. He examined attentively a number of samples of the crude cocaine which is now imported in large quantities. He found that they varied considerably in the amount of crystallisable cocaine they contained, and in certain cases they contained a large proportion of uncrystallisable base, distinctly different from cocaine. This substance, which was precipitated from the acid solution in the form of oily globules, produced some local anæsthesia when applied to the lips or tongue, but was far less active than the pure salt. Repeated crystallisation from strong alcohol was the most efficient mode of treatment, and when a certain degree of purity had been obtained, the base could be precipitated from its alcoholic solution by the addition of water. In using alcohol for this purpose, heat must not be applied, since cocaine then undergoes decomposition into benzoyl ecgonine. Another remarkable alteration of cocaine takes place when the base is precipitated from an aqueous solution of the hydrochloride by ammonia or other alkali. With a good sample, a dense precipitate is produced, either at once or on stirring the liquid with a glass rod, and this precipitate soon acquires a very distinct crystalline condition. If left standing for a few hours the precipitate becomes less bulky, and ultimately disappears, not because it is soluble in excess of ammonia, but because the cocaine has been converted into benzoyl ecgonine, which readily crystallises on evaporating the solution over sulphuric acid. This change involves a loss whenever the precipitate is left for any time in the liquid from which it has been thrown down. Cocaine hydrochloride should be free from colour and smell, and should yield a colourless solution. It should be perfectly neutral.

The principal impurity in the salts examined was undoubtedly the hydrochloride of the amorphous alkaloid. This differs from cocaine, not only in its physical characters, but chemically. Its anæsthetic properties are slight, and slow to manifest themselves. It has a distinctly alkaline reaction, is sparingly soluble in water, but freely so in alcohol and ether. A dilute solution becomes milky on the addition of ammonia, and remains so for several hours. The evaporated residue is gummy or pasty. A solution of the neutral hydrochloride becomes acid when evaporated, which accounts for the acid reaction sometimes acquired by solutions of cocaine salts when kept. Any peculiar smell is due to decomposition of the amorphous salt, the pure salt not being liable to such changes. It is a mistake to attempt the purification of the hydrochloride; it is so very soluble in water and in alcohol, that considerable loss is incurred. The alkaloid itself is much more susceptible of purification, and when pure yields a pure salt if carefully manipulated.

In conclusion, Dr. Paul observed that the quality of cocaine hydrochloride varied very much. The salt was sold at too low a price to insure purity, and those makers who produce a pure salt are heavily handicapped in the competition with others who supply an inferior article at a low price.

Alfred S. Gubb.

Article 333.

SURGERY AT THE FRENCH CONGRESS.

At the Congrès de Chirurgie Française, which commenced on the 12th ult., amongst the most interesting communications were the following :—

M. Ollier (of Lyon) stated that, with the use of antiseptics, resection of the wrist is advisable in cases of ankylosis. M. Ollier has performed it very successfully many times, and has obtained mobility of the wrist and perfect solidity. The fingers can be moved in a radius of from 40° to 45°, which is quite sufficient for ordinary purposes.

M. Demons (of Bordeaux) believes that certain cancers of the larynx can be cured by the total ablation of that organ. M. Demons has twice extirpated the larynx. The first patient was a man of 45 years, who had had syphilis. Epithelioma had commenced in the epiglottis, and successively invaded the larynx and base of the tongue. The ganglia were affected. A radical operation was performed. For nine months the patient was quite well. At the end of that time cancer reappeared at the base of the tongue. The second case was a man of 57, who had also had syphilis, and had long-standing throat trouble. The larynx was extirpated. At the end of a month the patient was cured. The disease has not reappeared. The patient cannot talk, but whispers so that he can be understood.

M. Chauvel (of Val-de-Grâce) gave the results of his observations on the effects of small projectiles penetrating the visceral cavities. He believes that all wounds of the abdomen, resulting in lesion of the viscera, should be treated by laparotomy, as infection arises from the extravasation of stomachal matters, the bile, or urine.

M. Thiriar (of Brussels) remarked that the three patients on whom he had performed cholecystectomy have been quite well ever since. He performed the same operation last July on a woman of 39 years of age, who had been first attacked in 1881 by hepatic colic, followed by vomiting. The operation was followed only by slight vomiting. The ablation of the gall-bladder is not a dangerous operation. From the results of M. Thiriar's operations, it would seem that cholecystectomy is preferable to cholecystotomy.

M. Socin (of Basle) made some observations on the radical cure of hernia by operation.

1. Operation should be performed except in cases where the intestine cannot or must not be reduced.

2. The radical cure of non-strangulated hernia is indicated—(*a*) in young patients under twenty years of age, when the classic treatment of the truss does not succeed in reducing the hernia completely and permanently ; (*b*) in adults when the truss does not reduce the hernia without pain.

3. There is more chance of success when the patient is young, or the hernia of more recent date.

4. The existence of double hernia in the patient or of hernia in his family diminishes the chance of success.

5. Corporal labour does not provoke a relapse.

6. It is unnecessary, often injurious, to wear a truss after the operation.

7. There is no danger except in the case of very old patients, of an enormous hernial tumour, or when the tegument is ulcerated.

8. The operation consists of the ablation of the cyst above the neck. It is not often necessary to have recourse to suture.

9. In cases of congenital hernia the dissection of the cyst is more difficult. The lower part must be preserved to form a new vaginal coat for the testicle.

10. In cases of ectopia with atrophy of the glandular tissue the testicle must be removed with the cyst.

M. Thiriar has operated in twenty-six cases of hernia, in twelve of which there was strangulation. All the results were good except in one case, that of an old man, 64 years old, of intemperate habits, who died, sixteen days after the operation, from encephalitis.

MM. A. Routier, Jules Bœckel, and Paul Segond also reported successful operations.

M. Lucas Championnière has operated eighty-one times in cases of hernia with excellent results. He believes that operation is indicated in slight cases. Pulmonary congestion is more to be feared in old patients and in severe cases.

M. Le Bec obtained the radical cure of hernia of the ilio-cæcal appendix, which was adherent and suppurating. The patient, a man of 59 years, appeared to be suffering from funicular tuberculosis. He presented a fistula in the middle part of the scrotum, which discharged large quantities of pus. M. Le Bec decided to operate. He discovered that the ilio-cæcal appendix adhered to the cyst, was very much inflamed, and that fistulous abscess had resulted. The operation, including the resection of the appendix, was successful ; at the end of three weeks the patient was quite cured. In five months he was able to work.

M. Guyon observed that the diagnosis of tuberculosis of the bladder is quite easy, and can be determined at an early stage of the disease by opening the bladder. M. Guyon operated on a young man who was attacked with an apparently incurable cystitis. The patient suffered pain that not even morphia could soothe. M. Guyon opened the bladder and found the mucous membrane red and granulated. He dilated the neck of the bladder and applied iodoformed oil to the mucous membrane, and powdered the inside of the bladder with iodoform. He inserted drainage-tubes, and dressed the wound with iodoform. For three years the patient has been quite well ; there is neither pus nor bacilli in the urine, nor any trace of genital lesion.

M. Monod presented a patient the flexor of whose thumb had been cut. M. Monod inserted the tendon of a rabbit between the extremities and sutured it. The patient can bend the thumb perfectly.

M. Schwartz (of Paris) reported an erectile tumour of the face which had been cured by electrolysis. The treatment was begun in July 1885, and continued until quite lately.

M. Redard explained the manner of making orthopædic jackets of plaster, gutta-percha, felt, and silicate of potass.

M. Bilhaut (of Paris) remarked that in cases of scoliosis it should be ascertained in the beginning whether the legs are of unequal length. If such be the case, the scoliosis may be attributed to that cause. The immediate treatment should be the use of soles in and outside the boots to establish equilibrium. The patients should be also treated by massage, gymnastics, with special exercises for the development of the shorter limb, electricity, and hydrotherapy.

W. Vignal.

ARTICLE 334.

EWALD ON THE NUTRITIVE VALUE OF PEPTONE ENEMAS.

DR. C. A. EWALD (*Therapeutische Monatsschrift*, No. 3, 1887, and *Centralbl. für die gesammte Therapie*, December 1887) investigated, carefully complying with the precautions necessary to secure accuracy to his experiments, the nutritive value of peptone enemas in three individuals, respectively aged 57, 34, and 32. The first, although afflicted with paralysis of the left arm, in consequence of apoplexy, from which he had recovered some years ago, was otherwise in good health, and weighed at the commencement of the treatment 47 kilogrammes (94 pounds). The weight of the second, an anæmic, badly-nourished idiot, but without any evident impairment of the internal organs, was 48 kilogrammes (96 pounds). The third, 44 kilogrammes (88 pounds) of weight, suffered from severe neurosis of the digestive tract, in consequence of which he was unable to take by the mouth more than the most minute quantity of food, and rejected any more copious meal immediately after ingestion. He, therefore, had already for a longer period been treated with nutritive enemas.

To these three test-subjects, injections were administered of Kemmerich's meat-peptone, of Merck's casein-peptone, of emulsions of raw eggs, and of slightly peptonised eggs, *i.e.* eggs emulsified with 0·15 per cent. of pure hydrochloric acid and with 3 to 5 grammes (2½ to 4 scruples) of pepsin. These enemas were given either daily, or every three days, or mostly every five days, regularly during three months.

Dr. Ewald was induced to try peptonised eggs, because test-experiments had shown that the contents of genuine peptone in the above-named preparation, as well as in Koch's peptones, were very minute and uncertain, and that eggs emulsified with pepsine and hydrochloric acid offered a more reliable and more equal substitute.

The results of these experiments were as follows:—The peptone preparations of the shops, in single doses of 25, 40, and 50 grammes (7 drachms, 1½ ounce, and 2 ounces) are of varying and uncertain influence on the change of matter (the transformation of nitrogen). In some single instances distinct and considerable increase of nitrogen in the urine took place, in some cases the nitrogen was only slightly augmented, in others no alteration was perceived. The enemas in every case, with the exception of one single instance, were followed by increase of urine, which by far surpassed the quantity of the injected water which had been required for the solution of the peptones. These preparations, therefore, act on the diuresis, probably by the salt which they contain.

These variations in the transformation of nitrogen after single doses of peptone indicate the necessity for equalising them within longer periods. In view of this, the third individual was treated with a series of injections in periods of from 3 to 5 days during nearly three months. The enemas consisted of 40, 50, and 75 grammes (1 ounce and 3 drachms, 1½ ounce, and 2 ounces and 3 drachms) of the peptone preparations of the shops, and of 4 to 6 eggs, which represented the proportionate quantities of nitrogen. The effect on the transformation of nitrogen was the strongest from Merck's casein-peptone; less so, but nearly equal, from peptonised eggs and Kemmerich's meat-peptone, and was the smallest when no peptone preparations or eggs were used for the enemas.

More important, however, than the transformation of nitrogen was its storage—*i.e.* the quantity retained at the different periods in the body, which respectively (during insufficient or inadequate nourishment) is derived from the component matter of the body itself, and consequently represents a loss. The smallest amount of storage takes place from casein-peptones, the greatest from peptonised eggs. Between these ranks that from meat-peptone and non-peptonised eggs; whilst the omission of the peptones of eggs regularly caused a loss, which was the greatest immediately after a precedent storage.

Of special interest are the following facts, which can be inferred with certainty from these experiments.

1. Absorption in the rectum is indisputable, but the amount of storage may be, owing to individual influences, beyond control, variable, more or less; it is therefore by no means a purely physical or chemical function, independent of nervous influences, which might be intentionally called forth in optional intensity.

2. The aptitude of an albuminous substance for absorption through the mucous membrane of the rectum does not depend upon its contents of genuine peptones, as eggs, or preparations of eggs, with the smallest quantity of peptone, are equally readily absorbed, and produce a greater amount of storage than Merck's and Kemmerich's peptones, which are five times, and twice as rich in peptones respectively.

3. The same results may be obtained by eggs in their natural condition, and still better by emulsions of eggs with hydrochloric acid and pepsin, as by the peptone preparations of the shops. The former treatment, moreover, has the advantage of a considerable saving of expense, which, calculated for three days and equal quantities of nitrogen, give the following proportions:—Merck's peptone, 16; Kemmerich's peptone, 14; peptonised eggs, 7; plain eggs, 4.

Dr. Ewald, in conclusion, gives several instructions for the preparation of nourishing enemata. In the hospital three to five eggs are beaten up with about 150 cubic centimètres (three ounces and a half) of a solution of 15 to 20 per cent. of grape-sugar, to which some starch or mucilage of gum may be added in order to thicken the fluid, or a few drops of tincture of opium, in case of irritability. The rectum must be previously cleansed by an enema of 250 cubic centimètres (six ounces) of tepid water or a solution of common kitchen salt, and the nourishing enema ought not to be injected before the (generally repeated) evacuations have taken place, lest it should be soon expelled again and its purpose frustrated. The quantity of this enema should never exceed 250 cubic centimètres, and it will be better to divide this quantity into two or three injections, to be given during the day.

Or, two grammes (half a drachm) of amylum or arrowroot are boiled with 50 grammes (one ounce and a half) of a solution of 20 per cent. of grape-sugar and a wine-glassful of red wine, to which, when sufficiently cooled, to prevent coagulation of the albumen, two to three eggs beaten up with a table-spoonful of cold water are gradually added. The whole quantity must never be more than six ounces. The addition of a teaspoonful of a meat or milk peptone of commerce to the solution of grape-sugar is optional, but not necessary, as the eggs will be absorbed without peptones.

The injection is made by means either of an enema-syringe or an irrigator with a soft tube of wide bore. After the injection, the patient ought to rest for a few minutes on the back or side.

Ferd. Adalb. Junker, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

335. Koch, P.—Chorea Minor. (*Centralbl. für die med. Wissensch.*, No. 9, 1888.)

336. Osler, W.—The General Etiology and Symptoms of Chorea. (*Ibid.*)

337. Neumann.—The Influence of Nervous Predisposition in the Causation of so-called 'Rheumatic' Facial Paralysis. (*Centralbl. für klin. Med.*, No. 11, 1888.)

338. Bernhardt, M.—A Case of Progressive Muscular Atrophy in a Young Patient, with Participation of the Facial Muscles. (*Ibid.*)

339. Massalongo.—Muscular Atrophy in Hysterical Paralyses. (*Ibid.*)

340. Bollinger.—A Case of Primary Actinomycosis of the Brain. (*Ibid.*, No. 9.)

341. Eisenlohr.—Acute Polyneuritis and Related Diseases. (*Centralbl. für die med. Wissensch.*, No. 12, 1888.)

342. Bonome.—On the Etiology of Tetanus. (*Ibid.*)

343. Stadelmann, E.—A Peculiar Microscopic Appearance in the Brachial Plexus in a Case of Neuritis after Typhoid Fever. (*Centralbl. für die klin. Med.*, No. 10, 1888.)

344. Leyden, E.—A Case of Bulbar Paralysis. (*Centralb. für die med. Wissensch.*, No. 9, 1888.)

345. Codeluppi.—Ascending and Descending Degeneration from Compression of the Cervical Medulla. (*Ibid.*)

346. Gilles de la Tourette.—Hysteria and Syphilis. (*Ibid.*, No. 10.)

347. Letulle, N.—Mercurial Hysteria. (*Ibid.*)

348. Guinon, L.—Mercurial Hysteria. (*Ibid.*)

349. Arthaud.—On the Pathology of Peripheral Neuritis. (*Ibid.*, No. 7.)

350. Oppenheim.—Fleeting Bitemporal Hemianopsia a Diagnostic Sign of Basal Cerebral Syphilis. (*Ibid.*, No. 11.)

351. Sacchi and Adsersen.—Sarcoma of the Spinal Pia Mater. (*Ibid.*)

Art. 335. *Koch on Chorea Minor.*—The author observed 267 cases, of which 100 were male and 167 female. As to age, 5·63 per cent. were between 1 and 5 years of age, 37·9 between 6 and 10, 33·4 between 11 and 15; the greatest frequency (62·4 per cent.) was between 7 and 13 years. In 100 cases the time of year at which the disease began was carefully noted; December comes first with 22 per cent., then January and March with 12 per cent. each, then April and November with 9 per cent. The heredity or otherwise was determined in 113 cases, in 90 of these (80 per cent.) there was no heredity, in only 23 cases was any hereditary predisposition made out. The cause of disease was sought for in 115 cases, in 49 of these no cause was found. In the remaining 66 various causes were assigned, chief among them being sudden physical excitation (25), and rheumatism (21). Some cases are given of great interest, especially some of transference of the disease, of menstrual derangement as a cause, and of chorea gravidarum in primal cases (3 cases). From the symptomatology we learn that severe melancholia was only observed once; hysterical attacks four times. Of 54 cases treated in hospital 9 were very severe, and 4 of these were fatal. These severe cases were more frequent amongst females than males in the proportion of 7 to 2. They were more frequent after puberty than before; and only 2 showed hereditary disposition to nervous disease. All the four fatal cases showed endocarditis, in two for the first time; in two recurring. A third of the severe cases had rheumatism sooner or later. Relapses were observed in 35 out of 162 cases (21·6 per cent.); 1 relapse in 22, 2 relapses in 10, and 3 relapses in 3 cases. There were 10 chronic cases, lasting one year to seven years, in 162 cases (6·1 per cent.) As to a connection with rheumatism, this was only made out in 26 out of 111 cases (23·4 per cent.); valvular disease was found in 21 out of 153 patients (13·7 per cent.); moreover, in 15 cases accidental heart murmurs or impure sounds were heard. Looking at chorea as an independent disease in its symptomatology, course, and nature, the author assumes as its essence a choreic alteration of the nervous system. On account of its immediate origin, typical course, and spontaneous cure, it is separated from neuroses like hysteria, hypochrondria, and epilepsy. Chorea is caused by the operation of either one definite central irritant or of several similar irritants; the part implicated is the pyramidal path, chiefly the cerebral part, but also to some extent the spinal. It is most probable that some infective agent is the original cause of chorea; this agent is so related to the specific virus of rheumatism that under certain circumstances the specific choreic alteration may originate from the latter. Endocarditis, like chorea itself, may be a product of the rheumatismal virus, or else may be due to the specific chorea virus, and a symptom of general chorea. According to this view, psychic influences operate by making the nervous system less resistant (locus minoris resistentiæ), and they facilitate the entry of the infection. In many cases of so-called 'reflex' chorea, the author thinks there is only an accidental coincidence with an essential chorea, as in the chorea of gravid women, unless we assume an irritation of the cortex of the brain from intracranial formation of osteophytes. Many cases of mimetic chorea are to be ascribed either to hysteria or simulation.

336. *Osler on Chorea.*—Dr. Osler's paper, 'On the General Etiology and Symptoms of Chorea, based on the Records of 410 cases at the Infirmary for Nervous Diseases, Philadelphia,' is thus summarised in the *Centralbl. für die med. Wiss.*, 1888, No. 9. Of the 410 patients, 125 were male, 282 female, in three cases the sex is not stated; 203 belonged to the first decade of life, 183 to the second, four to the third, one to the fourth, one was still older. In a few cases the disease appeared to be congenital. Negroes are rarely affected with chorea, Indians hardly ever. There were more cases in spring than in any other season; stormy weather favours the outbreak of chorea. Fright was assigned as the immediate cause in 76 cases (18·5 per cent.), and over-study in school was often given as a cause. Reflex and mimetic chorea rarely presented themselves. Rheumatism preceded chorea in 15 per cent., but the two diseases co-existed in only 7·5 per cent. Scarlatina had occurred in 95 cases, measles in 42, pertussis in 13. The hands were the first to be affected, then the face and limbs. Hemichorea was common: in 126 cases the movements were at first right-, in 80 left-sided; in only 6 cases were the

legs the first to be affected; in 126 cases the movements were general; the trunk and face were usually bilaterally affected. A fourth of all the cases showed difficulty of speech. Muscular weakness was common, and isolated paralyses persisted a long time. The muscles of organic life were never affected. In 5 cases there was also epilepsy, in 12 hysteria. Out of 50 cases the knee-jerks were normal in 26, lessened in 15, lost in 9. Affections of the skin were caused either by accompanying rheumatism (*peliosis rheumatica*), or by the use of arsenic (erythema, pigmentation, zoster). Heart-murmurs were heard in 120 cases, or 29·2 per cent. The disease occurred for the first time in 240 cases, twice in 110, three times in 35, four times in 10, five times in 12, and six times in 3 cases. Of 60 individuals affected three or more times rheumatism existed in 11. More relapses occurred in spring than in autumn. Seven cases were chronic, lasting for years. The author finally notices the 'chorea-habit' of Weir Mitchell, localised movements in children aged 7 to 10 years, belonging to the 'tic' class of movements; also chorea gravidarum, more frequent the first time of pregnancy, usually severe, and as a rule occurring only in those who had had chorea already when younger.

337. *Neumann on the Influence of Nervous Predisposition in the Causation of so-called Facial Paralysis from Cold.*—From observation of seventeen cases the author endeavours to represent that functional or rheumatic peripheral facial paralysis always develops, when it does develop, on the basis of a neuropathic disposition, chills and psychic influences acting only as accidental determining causes. In almost all the cases a hereditary predisposition and nervous antecedents (hysteria, neuralgia, psychoses, diabetes, arthritis) were established. Very interesting and convincing is the fact that three nervous sisters belonging to a neuropathic family all had facial paralysis.

338. *Bernhardt on a Case of (Juvenile) Progressive Muscular Atrophy, with Participation of the facial Muscles.*—A girl, aged 18, with an hereditary nervous disposition, complained for about a year of a gradually increasing weakness of the arms, which appeared at first on the left side, and then extended to the right. The scapulæ were more distant than usual from each other, and were imperfectly approximated. The deltoids, extensors of the arm, flexors of the hand, muscles of the thumb-balls, and interosseous muscles were well developed and acted well, but the flexors of the forearm and long supinators were paralysed and quite atrophied. Flexion of the forearm in the supine position was impossible; in the prone position this took place by action of flexor carpi ulnaris and flexor digitorum profundus. There were no fibrillar movements, nor real hypertrophies. All other movements of the arm were done, but with lessened strength. The contracting muscles showed no degeneration reaction, nor, indeed, the atrophic. The muscles of the trunk and legs all seemed healthy, except the anterior tibials, which were paretic, and could not be excited to action by either current. On the face the lips were curved outwards, and could only partially be controlled; they possessed electric excitability only in the mobile parts. This case belongs to the Landouzy-Dejerine type (facio-scapulo-humeral), but there was no family predisposition, no traumatic cause, and no hypertrophic or pseudo-hypertrophic muscular condition.

339. *Massalongo on Muscular Atrophy in Hysterical Paralyses.*—Cases of myatrophies in hysterical paralyses have increased since Charcot drew attention to them. Massalongo observed a case of hysterical epilepsy with left-sided total hemi-anæsthesia. After a slight injury to the left shoulder there appeared complete motor paralysis of the left limbs, soon followed by considerable atrophy of the affected muscles, especially those of the thenar and anti-thenar eminences, thus giving the impression of progressive muscular atrophy. The electrical excitability on the hemiplegic site was somewhat lowered quantitatively, and the tendon reflexes were lost.

340. *Bollinger on Primary Actinomycosis of the Brain.*—This is the first case of the kind observed hitherto. The patient was 26 years old, and during life a cerebral tumour was diagnosed. The chief symptoms were very severe headaches, paralysis of the abducens, and papillary congestion of the left eye, and short occasional attacks of unconsciousness. After death, a tumour of the character of a cysto-myxoma was found in the third ventricle, but all the ventricles were enlarged. The tumour derived apparently from the choroid plexus, and contained numerous colonies of actinomycetes in all stages of development. The usual tendency of this growth in the human subject to destruction of the affected tissue and suppuration was here altogether wanting. A 'crypto-genetic infection' may be assumed in this case, if anywhere, the organisms having entered the blood from some part of the mucous membrane, without leaving any traces at the place of entry, and then undergone transportation in an embolic manner to the brain. The patient for some years previous to the first symptoms had partaken largely of goat's and cow's milk, and the author regards the milk as possibly the carrier of the infection.

341. *Eisenlohr on Acute Polyneuritis and Related Diseases.*—In the first place, the author is of opinion that cases of spontaneous acute polyneuritis (non-toxic) are more numerous of late. In the winter months of 1886-7 nine such cases were observed by him, in which there had been no preceding infectious disease (syphilis and alcoholism were excluded); in one case only there was tuberculosis. The disease began with acute gastro-intestinal disturbance (diarrhœa, icterus) and moderate elevation of temperature. Spontaneous pains were never complained of; the paralysis, which extended to all four limbs, rapidly developed. Electrical excitability, direct and indirect, was lessened in all, seldom quite abolished; contractions could often be induced; all the severest cases showed the degeneration reaction. The functions of the cerebral nerves, the bladder, and the rectum were all intact, and the intellect was unaffected; the cutaneous sensibility was much less deranged than the motility of the limb. There were spontaneous pains (*sic, vide supra*) at the height of the disease in four cases, pressure-pains in the nerve-trunks in six cases; in the rest the muscles of the upper limb and of the calf were especially sensitive to pressure. The patellar reflex was lost at the height of the disease, except in two cases, and in these it was very much lessened, but the skin-reflexes were lessened only in the worst cases. In one case (ileo-typhus) an autopsy was made, and microscopical examination showed that the spinal cord and anterior roots were intact, but there was advanced parenchymatous degeneration of the muscular and cutaneous nerves; the muscles also showed degeneration.

After giving careful reports of some of the cases the author goes on to the difficulty of diagnosis in some cases between polyneuritis and poliomyelitis. Similar forms of atrophic paralysis having a common original cause but different localisation may develop at various points of the nervous system, especially in the motor tract. Treatment by inunction is recommended in non-tuberculous cases. Finally, the author discusses the resemblance between this disease and trichinosis, in which the tendon reflexes (especially the patellar) are often lost, and in some cases faradic excitability is often considerably lowered, and even quantitative alterations of galvanic muscular excitability may be found. In one such case the muscular nerves and nerve-trunk were found *post mortem* unaffected.

342. *Bonome on the Etiology of Tetanus.*—The author describes in detail his unsuccessful attempts to obtain pure cultivations of the tetanus-bacillus, the regular appearance of which he has established in three cases of tetanus in man, and by experiments on animals. The fall of the church in Bajardo, by which 70 people were injured, has lately afforded opportunity for observing tetanus, nine cases having occurred, all fatal except one. The wounded persons were covered with mortar and plaster dust, and particles of lime remained for a long time in contact with their wounds. By subcutaneous inoculations of this dust, typical tetanus was caused in mice and rabbits, as in Nicolaier's experiments. (*See* London Medical Recorder, March 1888.) The bristle-shaped bacilli were found in the exudation from the inoculated sites. These results, the author argues, afford further proof of the infection-theory of tetanus, and of the 'resisting capacity' of the infectious agent in the dry condition. The latter was also shown by successful inoculations, with dried exudations both from tetanic animals and from human beings, after four months' preservation. In a tetanic horse that had a wound covered with road-dust, also in a ram that had tetanus after castration, the tetanus-bacilli were found and employed in experiments.

343. *Stadelmann on a Peculiar Microscopical Appearance in the Brachial Plexus in a Case of Neuritis after Typhoid Fever.*—A man aged 27, during convalescence from a slight attack of typhoid fever, felt lightning-pains in the arms and legs, stiffness and cold feeling in the limbs, sleeplessness and sweats. Besides bronchitis and recent endocarditis, there was found pain, increasing on movement, in the limbs, abdomen, and lower half of the thorax. The limbs were very weak; the sensibility was lowered; the faradic excitability retained; the indirect, especially of muscles governed by the median nerve, lessened; the tendon-reflexes failed. The cerebral nerves were unaffected. Death occurred, without the appearance of any new symptoms, about twelve days after the beginning of the pains. At the autopsy there was found swelling and infiltration of Peyer's patches, and typhoid ulcerations; lobular pneumonic patches throughout the right lung, recent mitral endocarditis, and extensive parenchymatous degeneration in the brachial plexus and crural nerve. The spinal cord appeared normal macro- and microscopically, the muscles showed advanced waxy degeneration. The following remarkable appearance was found in the plexus brachialis, in undegenerated nerve-bundles. In the increased perineurium, in the endoneurium, and even in the loose tissue about the brachial artery were numerous, almost onion-shaped masses in concentric layers with large spindle-shaped nuclei, having long processes. There was no distinct lumen. Longitudinal section showed that these layers were formed by connective-tissue. The author has not found this appearance in the healthy brachial plexus (three cases), but Schultze has seen such in progressive muscular atrophy and syringo-myelitis, Nonne in combined shoulder-paralysis, Siemmerling and Oppenheim in tabes dorsalis, in peripheral nerves. Its meaning remains unexplained.

344. *Leyden on a Case of Bulbar Paralysis.*—A woman, aged 37, who had suffered three years previously with ear-disease, and since then had heard with difficulty, was affected with faintness while pregnant, after which there was difficulty of speech, with weakness in the lower limbs, later on in the right arm. On reception into the Charité Hospital there were Cheyne-Stokes respiration, paresis of the right facial nerve, nasal voice, flaccidity of the limbs, inability to stand, dysphagia. The patient was delivered of a healthy female child, but died of respiratory paralysis some weeks afterwards, eight months after the attack of giddiness. At the autopsy, an osteosarcoma of the size of an egg was found beneath the pons, which was much compressed.

345. *Codeluppi on Ascending and Descending Degeneration from Compression of the Cervical Medulla.*—A woman, aged 72, had two distinct kinds of disease, viz., a pellagrous mental debility (dementia melancholia) and symptoms of advanced degeneration of the motor tracts of the spinal cord. Investigation *post mortem* revealed ascending degeneration of the posterior and descending degeneration of the lateral tracts, which explained the anæsthesia, analgesia, and paraplegia during life. The author took this occasion to trace the posterior fibres of the spinal cord upwards, a problem still unsolved. He thinks himself justified in saying that the posterior columns, after their passage through the rectiform body, spread out in the whole posterior half of the bulb and pons, gradually contracting as they approached the cerebral peduncles. The author could not determine whether any handles passed off to the cerebellum. The results of experiments in this subject are promised.

346. *Gilles de la Tourette on Hysteria and Syphilis.*—The full title of the paper runs thus: 'Hysteria and Syphilis: the Influence of a Preceding Disease or Intoxication on the Mode of Localisation and the Form of Hysterical Affections' (*Centralbl. für die med. Wiss.*, 1888, No. 10). A man, aged 28, who had acquired syphilis ten years previously, suddenly lost consciousness, and on regaining it found himself hemiplegic and hemianæsthetic on the right side. Nightly headaches persisted, and the apoplectiform attacks recurred in spite of antisyphilitic treatment and moderate improvement of the paralysis. Charcot assumed the existence of an hysterical condition in this syphilitic man, for the following reasons:—The tongue was curved towards the paralysed side, the convulsive attacks had an hysterical appearance, the headache was associated with extreme hyperæsthesia of the hairy scalp, and, lastly, antisyphilitic treatment made no difference.

347. *Letulle on Mercurial Hysteria.*—The author gives four cases of chronic mercurialism which were observed for many years (the first case is of especial

interest, as it was followed up for six years in all sorts of hospitals in the most careful way), and arrives at the conclusion that the various symptoms which arise—namely, hemiplegia, hemianæsthesia, apoplectic attacks, transfer-symptoms, &c., are the expression of a hysteria which has developed in hereditarily *predisposed* persons under the influence of the metallic poison, as after lead- or alcohol-poisoning.

348. *Guinon on Mercurial Hysteria.*—The author describes *in extenso* the case of a looking-glass maker, aged 50, who suffered from quicksilver intoxication and alcoholism together, and had tremors, hemianæsthesia, limitation of the field of vision, convulsive attacks (regarded as hysteriform by the author), and central scotoma on both sides (this last is ascribed to alcoholism). A cure was effected by the use of magnets. Guinon concludes that the hysterical symptoms in this case were entirely dependent upon the mercurial poisoning; the disease was purely toxic, not symptomatic.

349. *Arthaud on the Pathology of Peripheral Neuritis.*—Examinations *post mortem* of subjects of advanced age, who had died of various diseases, resulted in undoubted, though not strongly marked, degeneration of the peripheral nerves. Further examination showed that these changes were always accompanied by alterations in the spinal membranes, and that neuritis was more frequent in the posterior than the anterior roots. The author is of opinion that a peripheral neuritis, which develops while the grey matter of the anterior columns remains unaffected, must be regarded as dependent on spinal meningitis.

350. *Oppenheim on Hemianopsia Bitemporalis Fugax as a Criterion of Basal Cerebral Syphilis.* This case was preceded by a similar case shown by the author in the *Gesellschaft der Chariteärzte* in 1885. In both, perimetric examination of the field of vision on the day of admission into hospital revealed large irregular half-moon-shaped defects of both temporal halves of the fields of vision. In the first case (in 1885), the hemianopsia gradually diminished in an irregular manner, and ceased after 5 months. In the second case (1887) the disturbance of vision, exactly similar to the above, disappeared in 5 or 6 days, after taking potassium iodide (3 grammes *pro die*). The other symptoms also rapidly improved, viz., violent headache, occasional vomiting, temporary double vision, decline of vesical acuteness, thirst, and the patient was cured within fourteen days. In the first of these two cases, in which the only symptoms were polydipsia, polyuria, and hemianopsia bitemporalis, the autopsy revealed (as expected) a gummous new formation proceeding from the basal meninges, and compressing the chiasma. Hemianopsia bitemp. fugax is therefore a valuable diagnostic symptom of syphilitic disease in the base of the skull.

351. *Sacchi and Adsersen on Sarcoma of the Spinal Pia Mater.*—In this case the sarcoma caused myelitis by compression and metastases occurred at the base of the brain followed by death. A peasant, aged 20, previously healthy, felt a sudden sharp pain under the left nipple, with formication and feeling of weight in the legs. At the level of the fifth to eighth vertebra was found a zone of lessened sensibility round the trunk; beneath this the sensations were all lost (touch, pressure, temperature, muscular feeling, localisation). Then followed loss of control of the sphincters, with signs of cystitis. The faradic and galvanic excitability was lowered, the knee-jerks were increased. Bed-sores followed, with paresis of the arms, and finally death. The autopsy (by Marchiafava) revealed a neoplasm at the junction of the middle and lower thirds, which both encircled the spinal cord and shifted it towards the left. It descended also in nodes towards the cauda equina. The tumour, a round-celled sarcoma, was easily distinguished from the spinal cord macroscopically, and microscopically processes were seen extending into the cord itself. Scattered metastatic nodes were found at the base of the brain, nowhere else.

E. J. EDWARDES, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

352. DUJARDIN-BEAUMETZ, DR. — On Phenacetine. (*Bull. Méd.*, April 1, 1888.)

353. POULET, DR.—On the Treatment of Typhoid Fever by Strophanthus Hispidus. (*Bull. Gén. de Thérap.*, Feb. 29, 1888.)

354. DAVIS, DR. NATHAN S.—On Antipyrin in Rheumatism. (*Canada Medical Record*, December 1887.)

355. ELVY, DR.—On the Contra-indications and Dangers of Antipyrin. (*Rev. Gén. de Clin. et de Thérap.*, March 1, 1888.)

356. GUÉNEAU DE MUSSY.—Cough Pills.

357. RICHARDSON. — On Tannin-wool. (*Asclepiad*, February 1888, p. 47.)

358. MURRELL.—On Syrup of Tar in Winter Cough. (*Brit. Med. Jour.*, March 1888, p. 463.)

359. TERRIER, GAUCHER, AND BUCQUOY.—On the Internal Use of Boracic Acid. (*Bulletin de la Société de Médecine.*)

360. JACCOUD.—On Salicylic Acid in Pulmonary Tuberculosis. (*Revue de Thérapeutique*, February 14.)

361. BAILLY, VIDAL, BOUCHARD, AND BESNIER.—On a New Method of Freezing. (*Gazette des Hôpitaux*, February 2.)

362. KORCZYNSKI AND HOLST.—Nitro-glycerine in Affections of the Heart and Kidneys. (*Paris Médical*, Jan. 7.)

363. DURET.—On Poisoning by Iodine. (*Paris Médical*, Feb. 18, 1888.)

364. BOUCHARD.—On Typhlitis. (*Revue Thérap.*, Feb. 18, 1888.)

365. TEDESCHI.—On Infantile Cholera. (*Revue de Ther. Med. Chir.*, Feb. 15, 1888.)

366. VOSKRESENSKY, DR. N.—A Case of Opium Poisoning cured by Atropia. (*Russkaia Meditzina*, No. 13, 1887, p. 232.)

367. LICHTERMANN, DR. MIRON M.—On the Treatment of Diphtheria. (*Meditz. Oboz.*, No. 24, 1887, p. 1123; and a Separate Reprint, 1888.)

ART. 352. *Dujardin-Beaumetz on Phenacetine.*—In order to break down the present monopoly of the manufacture of antipyrin, experiments have been made with various substances which might take the place of this popular remedy. One of these is known as para-acet-phenetidin. It is a white crystalline salt, more insoluble than acetanilide, giving the reactions of the oxy-phenols. It yields a green colour with sulphate of copper, and red with perchloride of iron. In five-grain doses it produces a durable fall of four or five degrees in the temperature of febrile patients. In this respect it is superior to antipyrin, while, as an analgesic, it is free from many of the inconveniences attending the administration of acetanilide.

353. *Poulet on the Treatment of Typhoid Fever by Strophanthus Hispidus.*—Dr. Poulet reports three cases of typhoid fever treated by means of strophanthus. The results obtained were 'magical,' and he knows of no remedy which can compare with strophanthus in the treatment of this disease. As an antithermic its effects are certain and persistent, and are not accompanied by any depression. It appears to hasten the period of defervescence and effectually controls the tendency to hæmorrhage. He recommends that it should be given early in the attack.

354. *Davis on Antipyrin in Rheumatism.*—The greatest and most rapid improvement was obtained in cases in which there was a rise of temperature above the normal. In the hospital cases most recently treated the drug was given in 15-grain doses every four hours, diminishing its frequency as an improvement obtained. He preferred, however, a larger dose to begin with. The advantage of antipyrin over the salicylates consisted in its less nauseating properties and its less liability to provoke vomiting, headache, and noises in the ears. The alleged ill effects of antipyrin were of very rare occurrence. The use of the drug did not appear to influence the frequency of the occurrence of heart complications, and their existence is not a contra-indication to its employment. Its power of allaying pain in rheumatism was not dependent probably upon vascular changes, but upon a direct action on the nervous system. Dr. Davis concludes that—1. It is as efficacious as the salicylate of soda, producing similar therapeutic results, and is less nauseous than the latter, and does not produce headache or ringing of the ears. 2. Usually it acts most efficiently in the frankly acute cases. 3. Besides reducing, by its antipyretic properties, the fever, and also the pain, it reduces the latter by acting directly upon the nervous system.

355. *Elvy on the Contra-indications and Dangers of Antipyrin.*—Antipyrin should not be administered in anti-hyperpyretic doses to patients suffering from renal disease, it having been demonstrated that its effect is to suspend the functional activity of the kidneys. For anodyne purposes, antipyrin should be avoided in cases of real angina, because, although it may allay the pain, it acts injuriously on the muscular structure of the heart. In pseudo-angina there is no reason to prefer it to morphine. The danger to anginal patients from the administration of antipyrin consists in that (1) there is a constant risk of acute dilatation of the heart, which may result in depletion of the vessels supplying the nervous system and so cause death from collapse. (2) All anginal patients have more or less diseased arteries, and the kidney function is consequently impaired. Dr. Elvy considers antipyrin a drug which has obtained notoriety by false pretences. In one case it modifies the temperature without diminishing the fever; in another it alleviates the pain but increases the risk in such wise that 'if patients feel better while they live, they nevertheless incur serious risks.'

356. *Guéneau de Mussy's Cough Pills.*—Purified tar, 2 grammes; Dover's powder, 3 grammes; powdered benzoin, q.s. To make forty pills. Two to six to be taken daily for the cough in emphysema and chronic bronchitis, &c. Alfred S. Gubb.

357. *Richardson on Tannin-wool.*—In the *Asclepiad*, February 1888, p. 47, Dr. Richardson gives the details for preparing tannin-wool. To distilled water heated to 140° F., add pure tannin up to saturation, stirring carefully all the time. When the water is saturated add to it pure cotton-wool, bit by bit, until all the solution is taken up by the wool. Lastly, put the saturated wool in an evaporating dish, and dry it slowly. It is then ready for use, but must be kept in a closed bottle, and should be teased out just before being used. A good stock of tannin-wool is very useful. It is a ready styptic, and in treating ozæna and other diseases attended with fetid odours it is of great practical service. Tannin-wool can easily be iodised by making an ethereal solution of iodine, saturating a portion of the cotton with the solution, and allowing the ether to evaporate. One grain of iodine to an ounce of cotton is sufficient, and makes a very good preparation to apply to bed-sores.

358. *Murrell on Syrup of Tar in Winter Cough.*—In the *Brit. Med. Jour.*, March 1888, p. 463, Dr. Murrell recommends tar as a remedy for chronic bronchitis and winter cough. It is best to use it in the form of the *syrupus picis liquidæ* of the U.S.P., prepared as follows. Tar, 6 parts; cold water, 12 parts; boiling distilled water, 50 parts; sugar in coarse powder, 60 parts, to make 100 parts. Upon the tar, contained in a suitable vessel, pour the cold water, and stir the mixture frequently during twenty-four hours; then pour off the water and throw it away. Pour the boiling water upon the residue, stir the mixture briskly for fifteen minutes, and set it aside for thirty-six hours, stirring occasionally: decant the solution and filter. Lastly, in 40 parts of the filtered solution dissolve the sugar by agitation without heat. It is usually given in doses of from two to four drachms every three hours, or oftener. It may be flavoured with the syrup of Virginian prune, and if used for adults its efficacy may be greatly increased by the addition, about five minims, of the 2 per cent. solution B.P. of apomorphine. This combination relieves the cough, renders expectoration easy, and gives the patient sleep very readily. Richard Neale, M.D.

359. *Terrier, Gaucher, and Bucquoy on the Internal Use of Boracic Acid.*—At a recent meeting of the Société Médicale des Hôpitaux, M. Terrier stated that since 1886 he had employed biborate of soda, which he considers vastly superior to boracic acid, in the treatment of affections of the urinary passages. He very much doubts the good effects attributed by M. Gaucher to boracic acid in the treatment of impetigo, and still more that M. Gaucher had found in this substance an agent to destroy the pathogenic microbe of tuberculosis. (*See* London Medical Recorder, p. 63, Article 115.) M. Gaucher remarked that all the physicians at the Hôpital St. Louis and at children's hospitals treat impetigo by this method, and added that he had only recorded the modifications he had observed in the sputa of tuberculous patients treated by boracic acid. M. Sévestre stated that he employs boracic acid in the treatment of impetigo at the Hôpital des Enfants Assistés, and has obtained excellent results with it.

360. *Jaccoud on Salicylic Acid in Pulmonary Tuberculosis.*—The *Revue de Thérapeutique* of February 1 contains the following note upon pulmonary tuberculosis by Professor Jaccoud. He regards it as an acute infectious affection. The only effectual method of combating this affection is to substitute the form which develops slowly, and may therefore be arrested, for the form which develops

rapidly and quickly proves fatal. It is generally admitted that salicylic acid is the best agent for reducing the fever which is the chief factor in producing the pulmonary lesions. This substance should be administered in doses of 2 grammes daily for three days; in doses of 1½ grammes during the three following days. The doses are then suspended for two days, after which they are resumed as before. If the fever diminishes, 1 gramme of salicylic acid is then administered daily.

361. *Bailly, Vidal, and Others on a New Method for Local Freezing.*—At a recent meeting of the Académie de Médecine, M. Vidal made a report on a note by Dr. Bailly concerning a new method of local refrigeration by chloride of methyl. M. Bailly concludes, from numerous experiments, that plugs, of which the centre is formed of dry cotton-wool and the periphery of floss silk—the whole surrounded by gauze—are the best agents for absorbing and preserving the refrigerant liquid. Two-thirds of cotton-wool to one-third of floss silk are employed. By a prolonged application of these plugs, saturated with chloride of methyl, M. Bailly has alleviated the pain in twenty-six cases of toothache and in nine cases of facial neuralgia. Out of ten cases of sciatica he obtained successful results in eight. In sixty-two cases of different forms of neuralgia recovery was almost invariably the result of this treatment. Of sixteen cases of lumbago, fourteen were rapidly cured. MM. Dieulafoy, Bucquoy, Féréol, Laillier, and Pozzi have employed this method to soothe abdominal pains. M. Bouchard has found it efficacious in intercostal neuralgia, torticollis, muscular pains, lumbago, toothache, in one case of lead colic and one of gastric attack of tabetic origin. M. Bouchard found that, at certain times, it modified dyspnœa in an emphysematous asthmatic patient. M. Bailly has employed this method to obtain local anæsthesia before opening abscesses, incising carbuncles, removing growths, and in anal fistula. M. Vidal stated that he had performed over 120 operations of different kinds during induced anæsthesia by M. Bailly's method, which was applied about 360 times in those cases in which the operation could only be completed in several sittings. M. Bouchard remarked that M. Bailly had perfected M. Debove's method. M. Bouchard has substituted the reaction produced by refrigeration for the actual cautery with advantage, especially in the treatment of uterine affections. M. Besnier believed that M. Bailly's method might prove of great service when applied to the mucous membranes, but added that it would be advisable to interpose a piece of plaster.

362. *Korczynski and Holst on Nitro-glycerine in Affections of the Heart and Kidneys.*—Nitro-glycerine in moderate doses has in many cases proved very useful. Experiments made with this substance have shown that it reduces arterial tension, raises the action of the heart, and moderates the pulse. Under its influence the sounds at the apex become more sonorous, the face becomes red, there are alternate sensations of warmth and cold in the head and face. Its action is analogous to that of nitrite of amyl and nitrite of sodium. Most authors prescribe 1 per thousand drops to begin with. Korczynski records a case of aortic contraction in which 30 drops of a solution of 1 per cent. were administered, but in other cases 1-50 of a drop has determined morbid symptoms. M. Holst, who has lately studied the action of nitro-glycerine, attributes these symptoms to individual reaction in different patients. He cites a number of cases in which he has employed this substance, which proved efficacious in certain instances, but in others had no effect. He concludes that nitro-glycerine has an energetic action on the innervation of the heart, but that it is only obtained when there is no organic lesion in the heart or aorta, or is only rarely observed in such cases. Dr. Holst cured a patient suffering from angina pectoris with nitro-glycerine, but in this instance there was no organic affection of the heart. He believes that nitro-glycerine might be employed with advantage in illnesses in which the heart is seriously weakened, and which have hitherto been treated with camphor, musk, &c. He does not regard this substance as a diuretic, although he has found that it increased the flow of urine in certain cases. This result he attributes to the increased action and regularity of the heart caused by nitro-glycerine. It is impossible to prescribe fixed doses of nitro-glycerine. Certain patients may take repeated doses of 6 drops with impunity, whilst with others 4 drops slacken the pulse to a considerable extent. Small doses should be administered at first, which may be gradually increased.

363. *Duret on Poisoning by Iodine.*—According to M. Duret intoxication by iodine is manifested in three distinct forms. The eruptive, the cerebral or delirious, the syncopal or hypothermic. The eruptive form is the most frequent. It is characterised by a rubeolar eruption appearing on the different parts of the body, and far removed from the point of application. The poisonous and iodised principles are absorbed by the body, and this eruption is probably caused by the eliminating process carried on through the gland of the skin. The second form is characterised by epileptic symptoms, or by fits of sleeplessness accompanied by delirium. The third form is more serious. The absorption of the iodine is followed by a large increase or decrease in the temperature, sometimes falling as low as 34°·6. The symptoms cease as soon as the iodine is withheld. Thus, if the use of iodine is valuable on account of its antiseptic properties, it must be employed with discretion, as in many cases it has all the inconveniences of sluggish medicines and provokes lymphangitis and phlegmon. M. Duret has twice observed inflammation produced by its use in wounds on the hands and fingers. The inflammation ceased when the use of iodine was discontinued.

364. *Bouchard on the Treatment of Typhlitis.*—M. Bouchard indicates the following as an excellent treatment in cases of typhlitis:—Soothe the pain by a subcutaneous injection of morphia, if very sharp; if not, apply a thick layer of Neapolitan ointment with belladonna, covered by a large and very hot poultice. Administer aseptic rectal injections twice a day, with at least one litre of water, to which should be added 5 grammes of borate of soda, and two or three teaspoonfuls of tincture of benzoin and camphorated alcohol mixed. Injections must be given very slowly. Absolute rest is indispensable. No purgatives—or, if any, only those of the mildest kind, such as magnesia in water, &c. The lightest kind of diet, such as will leave no deposit for intestinal fermentation. Milk and alkaline water taken in small quantities; later on, milk thickened with yolks of eggs. This treatment will generally restore intestinal asepsia. If at the end of a fortnight there is thickening round the cæcum, a small blister should be applied.

365. *Tedeschi on Infantile Cholera.*—Tedeschi advocates the following mixture as the best substitute for cows' milk in infantile cholera :—White of eggs, 15 grammes; oil of sweet almonds, 35 grammes; sugar of milk, 40 grammes; carbonate of soda, 0·40 grammes; chloride of sodium, 0·20 grammes; phosphate of lime (neutral), 2·50 grammes; water, 1 litre—made into an emulsion. This mixture has been used in fifty-one cases of infantile cholera, of which forty-four were cured, three died, and the results in the other cases are not known. W. Vignal.

366. *Voskresensky on Atropia in Opium Poisoning.*—In the *Russkaia Meditzina*, No. 13, 1887, p. 232, Dr. N. Voskresensky relates a remarkable case of opium poisoning in an infant, aged one month. By mistake (instead of Hufeland's powder) 5 grains of Dover's powder (Ph. Ross.) were administered to the child at 1 P.M., the ingestion being soon followed by a profound soporific state with stertorous breathing. When first seen by the writer (at 9 P.M.) the patient could not be roused by any means, was pale, slightly cyanotic, loudly snoring, with extremely weak and slow pulse, and narrowed pupils. No vomiting could be induced. In spite of the administration of tannin and coffee the patient's state steadily grew worse and seemed quite hopeless. At 10 P.M. one-thirtieth of a grain of atropine was injected under the skin. In a quarter of an hour retching and a gradual dilatation of the pupils appeared. The infant could now be roused by various stimulating means, such as cold irrigations, rolling from side to side, &c. About 2 A.M. the respiration and pulse became normal. By the end of twenty-four hours (after the ingestion of the poison) the child was quite well.

367. *Lichtermann on the Treatment of Diphtheria.*—In the *Meditz. Oboz.*, No. 24, 1887, p. 1123, Dr. Miron M. Lichtermann, of Berezovka, Kherson Government, emphatically recommends the following plan of treatment, which he has employed with satisfactory results in about three hundred cases of this formidable disease. Having been called to a diphtheritic patient, the writer selects the best room in the house, and disinfects it by means of chlorine gas, evolved from chlorinated lime and muriatic acid. An hour later he ventilates the room, and then removes the patient into it. The treatment begins with a tepid (30° C.) foot-bath of fifteen minutes' duration, about two tablespoonfuls of mustard flour being added to water. After the bath the patient is wrapped up in blankets to perspire for two or three hours. The bath is repeated every evening. At the same time there are used :—1. *Locally* (*a*), a solution of salicylate of sodium (2 drachms) in glycerine (4 drachms), to paint the throat four times a day; and (*b*) a solution of chlorate of potassium (2 drachms) in distilled water (6 ounces), to gargle the throat freely every half an hour; and 2, *internally*—Focke's and Heyder's formulæ—(*a*) a 'white mixture,' consisting of chlorate of potassium (1 drachm), distilled water (6 ounces), and simple syrup (1 ounce), to take a tablespoonful every hour for an adult; and (*b*) a 'red mixture,' consisting of muriatic acid (48 fluid grains), distilled water (6 ounces), and raspberry syrup (1 ounce), to take a tablespoonful hourly, for an adult. The patient takes a dose of the 'white mixture,' and immediately after a dose of the 'red' one, every hour, day and night. The dose for a child under two is one teaspoonful of each mixture; for a child between two and four years, half a tablespoonful. The room and the patient are 'sprayed' over with a 3 per cent. solution of carbolic acid four times a day. The patient discharges his sputa, &c., into a vessel containing a 5 per cent. carbolic solution. Under this treatment the temperature is said to return to a normal level in about 24 hours, whilst the faucial pseudo-membranes disappear leaving no trace after eight paintings (that is, in 48 hours). The results which have been obtained from the method sketched above are as follows :—Up to April 1886 Dr. Lichtermann had been treating his numerous diphtheritic patients, after all other possible plans recommended in international literature, the mortality ever keeping up to about 45 per cent. From April 1886 to October 1887—(*i.e.* during 18 months) he met at Berezovka (a veritable nest of diphtheria in the shape of a deep, damp, always foggy, and muddy valley, surrounded by high hills, and supplied with a polluted water supply) as many as 237 cases of the disease, including 68 severe cases of gangrenous variety, and treated them after the plan recommended. Only four—that is, only about 1·7 per cent.—died. In October 1887 he was invited by the authorities to stamp out a diphtheritic epidemic which had broken out in a neighbouring town. Up to Oct. 15 he had under his care fifty-seven cases, eight of which (14 per cent.) ended fatally. All these eight patients had fallen ill about five days before the arrival of the writer. Dr. Lichtermann attempts to explain his striking success by the following hypothetical admissions :—1. Under the influence of diaphoresis (foot-baths) the patient's blood becomes more concentrated or richer in salts, and hence less suitable for the growth of pathogenic microbes of diphtheria (*cf.* Wachsmuth's *Die Diphtheritis-Heilmethode*, Berlin, 1886). 2. Under the influence of an internal and external use of chlorate of potassium, such an inspissation of the patient's blood increases still further, and that in a considerable degree. 3. Under the influence of a combined use of the chlorate and hydrochloric acid, a free chloro-chloric acid is formed which, in a nascent state, develops a powerful oxidising and parasiticide action (*cf.* Focke's paper in the *Centralbl. für klin. Med.*, No. 35, 1886; and Heyder's *ibid.*, No. 11). [Dr. Lichtermann does not mention anything about the average duration of his treatment. Neither does he say whether he happened to observe any accessory unwelcome effects of so free a use of chlorate of potassium. Meanwhile, this point has a paramount practical importance, since it can be regarded now as an established scientific fact that the drug represents a fairly powerful poison whose therapeutic use requires the utmost caution. In fact, the dangers of the chlorate are so great and so obvious, that some eminent modern clinicists—amongst them, Professor V. A. Manassein, of St. Petersburg—recommend 'to altogether discontinue any internal administration of the drug, for, generally speaking, there do not exist any serious or firmly established indications for its use in this way.' *See* the *Provincial Med. Jour.*, March 1888, p. 135, where a short retrospect of the toxicological literature concerning chlorate of potassium may be found.—*Rep.*] V. Idelson, M.D.

M. Pozzi, at a recent meeting of the Surgical Society, submitted several surgical instruments, invented by M. Auguste Reverdin, of Geneva. They comprise a uterine dilator, intended to facilitate the irrigation of the uterus; a modification of the Jacques-Reverdin needle; a ligator, and a bistoury for opening deep pus areas.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

368. APOSTOLI, DR.—On the Electrical Treatment of Hydro-salpinx. (*Nouv. Arch. d'Obst. et de Gyn.*, Feb. 25, 1888.)

369. RUSHMORE, DR.—On Veratrum Viride in Puerperal Convulsions. (*Archives of Gyn.*, January 1888.)

370. RUTH, DR.—On the Effect of Opium on the Unborn Child. (*Jour. of the American Medical Association*, March 10, 1888.)

371. VILLA, DR. ANGEL.—On the Electrical Treatment of Uterine Fibroids. (*Nouv. Arch. d'Obst. et de Gyn.*, Jan. 25, 1888.)

372. LAGET, DR.—On the Employment of Antipyrin during Labour. (*Rev. de Thérap.*, March 15, 1888.)

373. POLK, DR. W. M.—On the Surgical Treatment of Salpingitis. (*Boston Med. and Surgical Jour.*, Feb. 23, 1888.)

374. HYDE, DR. JOEL W.—On the Use of Ergot in Obstetrics. (*Brooklyn Med. Jour.*, February 1888.)

375. BLANC, DR. EMILE.—On the Effect of Ergot on Sub-involution of the Uterus. (*Annales de Gyn.*, March 1888.)

376. TERILLON, DR.—Third Series of Thirty-five Ovariotomies. (*Bull. Gén. de Thérap.*, Jan. 30, 1888.)

377. CHARLES, DR.—On Antisepsis by means of the Perchloride of Mercury. (*Jour. d'Accouchement de Liège*, Feb. 15, 1888.)

378. BAER, DR. B. F.—On a Case of Traumatic Hæmorrhage into an Ovarian Cyst: Peritonitis: Operation: Recovery. (*Obst. Gaz.*, February 1888.)

379. OWENS, MR. E. MATTHEWS.—Two Cases of Ovariotomy. (*Australasian Med. Gazette*, Feb. 15, 1888.)

380. WORRALL, DR. RALPH.—Case of Abdominal Section with Reopening of the Wound on the Eighth Day for Purulent Peritonitis. (*Austr. Med. Gaz.*, Feb. 15, 1888.)

381. CUNNINGHAM, DR. W. M. — Extra-Uterine Pregnancy and Gastrotomy. (*Archives of Gynæcology*, February 1888.)

382. BECKETT.—On the Treatment of Mammary Sinus by Extract of Belladonna. (*Indian Med. Gaz.*, January 1888, p. 10.)

383. BALLANTYNE.—On Mitral Stenosis in Labour and the Puerperium. (*Edinburgh Med. Jour.*, March 1888, p. 796.)

384. GREENE.—On Chloride of Sodium in the Sickness of Pregnancy. (*Medical Press*, March 1888, p. 239.)

385. GARRIGUES, DR. H. J.—A Case of Laparotomy for Ruptured Uterus. (*Philadelphia Medical News*, March 3, 1888.)

ART. 368. *Apostoli on the Electrical Treatment of Hydro-salpinx.*—The results of a series of observations have led Dr. Apostoli to conclude (1) that fever and inflammatory conditions do not constitute an absolute contra-indication in gynæcology to systematic appropriate treatment by means of the galvanic current; 2, that inflammatory conditions, short of suppuration, involving the annexes of the uterus may be treated by electricity, but suppuration constitutes a contra-indication unless the current be employed in the form of a galvano-cautery to open up a passage for the evacuation of the pus; 3, the galvano-cautery fulfils a double purpose; it may be used to cause inflammation to abort, and so prevent its further evolution, or to create an issue for the products of suppuration; 4, all inflammatory exudations projecting into the posterior *cul-de-sac* should (with certain exceptions) be treated by means of the galvano-cautery puncture; 5, the method may be successfully employed in the treatment of salpingitis and hydro-salpinx, and the facility and absence of danger will be in proportion to the closeness and juxtaposition of the tumour and the vaginal walls; 6, he insists on the necessity of following his instructions as to the method of galvano-puncture, its depth, the size of the trocar, antisepsis, &c.; 7, two single galvano-punctures with the negative electrode sufficed to effect a cure in a case of acute hydro-salpinx.

369. *Rushmore on Veratrum Viride in Puerperal Convulsions.*—The following conclusions seem to be fairly deducible from a somewhat limited experience; that veratrum viride is employed by the profession to a very limited extent; that, in the management of puerperal eclampsia, it has been administered in large and sometimes heroic doses with no poisonous effects in most cases; and, where alarming symptoms have developed after its use, they have easily been relieved by usual remedies; that in health a large dose may produce both very alarming symptoms and death; that a tolerance of the drug is produced by a condition of vascular tension, common to many diseases; that it is a safe, certain, and manageable vascular sedative; that, in order to control the convulsions of the puerperal state, it must be given in doses sufficiently large to bring and keep the pulse down to about sixty beats per minute, and that thus far it has given a mortality of thirty-one per cent.

370. *Ruth on the Effect of Opium on the Unborn Child.*—Dr. Ruth suggests that, with the knowledge that as little as $\frac{1}{100}$ grain of opium will give rise to convulsions in very young children, practitioners should ask themselves whether a similar effect is not likely to be produced on the fœtus *in utero* if large doses of opium be given to the mother. He shows that in the case of a woman, weighing 120 lbs., carrying a child of 20 lbs., to whom, say, four grains of opium are given within a few hours, the child's share would amount to $\frac{1}{5}$ grain—amply sufficient, therefore, to give rise to toxic effects. He argues that, as a matter of fact, the result of administering opium to pregnant women is often to cause violent convulsions in the unborn child, which may result in death of the fœtus and abortion. If these inferences be correct, it is obviously undesirable to administer opium to women who are threatened with abortion. Dr. Ruth says that, as a matter of fact, opium is a very unsatisfactory treatment in such cases, and often appears to aid in producing the very condition it is intended to avert. Opium is said by Bartholow to cause death in infants by paralysis of the muscles of respiration, and sometimes of the heart. As respiration has not yet been established in the fœtus, respiratory failure is not to be feared, and this will account for the small number of deaths from administering opium to pregnant women when labour is not threatened or in progress, and will also account for the relaxed condition and feeble hold upon life of children born while the mother is under the influence of an opiate.

371. *Villa on the Electrical Treatment of Uterine Fibroids.*—Theoretically the positive pole decomposes the tissues and fixes their acid elements, while the negative electrode fixes the basic elements. With the former the tissues are alleged to be subjected to a chemical action analogous to that of acids, producing a fibrous, solid, retractile cicatrix; in the latter the action is that of the caustic alkalies—soft, non-retractile cicatrix. According to Dr. Villa, nothing of the kind has been proved to take place

and there is no reason in theory or experience to lead one to expect it. Criticising the results obtained with the primary interrupted current by Dr. Chéron and Aimé Martin, he says that only partial successes are alleged, no case of cure. Dr. Villa's own experience of the method extends to twenty cases, in none of which had the tumour disappeared, or even diminished in size. He remarks that all cases the diagnosis of which was doubtful (exudations, parametritic inflammation, &c.), were carefully put on one side, and the method was applied exclusively to fibroids. In such cases the pain was not influenced to any extent ; the hæmorrhage, occasionally lessened at the commencement of the treatment, never failed to return if the latter were discontinued, and this even after months of continued application. In some few cases after long and patient treatment, menstruation had been regulated and reduced in amount, but not in cases of soft fibromata of a myxomatous or cystic nature, nor in patients already debilitated by suffering and loss of blood. The only incontestable advantage attending the treatment, according to Dr. Villa, was a stimulating effect on the general nutrition, and a feeling of comparative comfort. The effect of the electrical current is mainly on the muscular structure of the uterus, and may thus favour the enucleation of interstitial fibroids of moderate dimensions. Dr. Villa concludes that the electrical treatment of fibroids is 'an unreliable palliative method, hardly applicable in practice.' His great reproach against it is its 'inefficacity.'

372. *Laget on the Employment of Antipyrin during Labour.*—In a case of premature delivery, towards the termination of labour, when the pain was very severe and appeared to lessen the effect of the uterine contractions, Dr. Laget gave two consecutive doses of 30 grains of antipyrin per rectum, which caused a prompt diminution in the pain without lessening the force of the muscular contraction, which became more rhythmical and effectual.

373. *Polk on the Surgical Treatment of Salpingitis.*—The writer says that there are three forms of salpingitis which lead to collections in the tubes, pyo-, hæmato-, and hydro-salpinx. In pyo- and hæmato-salpinx the tubes should be cut down upon and removed, preferably in the direction of pointing, and, failing that, the central abdominal opening should be chosen. In parenchymatous salpingitis he thinks it was also preferable to operate. Where only one tube was affected it might nevertheless be considered advisable to extirpate both, as the other was very apt to become filled subsequently. If the endometrium were sound, however, the healthy tube may be left. They should never be removed for catarrhal conditions. When bound down by adhesions which give rise to suffering at the menstrual period, it might be justifiable to cut down and break through the adhesions.

374. *Hyde on the Use of Ergot in Obstetrics.*—Ergot administered prior to delivery, is productive of a great mortality among children. It is liable to bring about rupture of the uterus as well as of other maternal soft parts. In lingering labours from inertia the forceps are far safer to both mother and child. Ergot is a more frequent cause of retention of the placenta than all other causes. It adds much needless distress to already exhausted mothers by prolonging the after-pains. It is a very potent factor in the production of sub-involution and displacements. It is never necessary, since if the hæmorrhage have not occurred, it is not called for, and if it have occurred, it would not operate in time.

375. *Blanc on the Effect of Ergot on Sub-involution of the Uterus.*—About one hundred women were selected on the day after delivery, and were methodically observed to the tenth day. They were subdivided into three groups : a first group of forty women to serve as a criterion, and to whom no ergot was given ; a second category of forty women to whom ergotine was given by subcutaneous injection during the first five days ; and a third series of twelve who were ergotised to the tenth day. The only selection made was the choice of women who had gone through a normal, uncomplicated labour, in order to avoid false conclusions. The preparation used was the ergotine manufactured by Yvon. A cubic centimètre of his solution, equivalent to a gramme of ergot, was injected hypodermically into the abdominal walls. The first injection was made soon after delivery, and if in a quarter of an hour the uterus were not found hard and contracted, a second, and even a third injection was made. In some rare cases even three injections failed to excite the uterus to contraction. The ergot, contrary to the observations of Velpeau, Crozat, &c., far from relieving the after-pains by facilitating the expulsion of clots, seemed to accentuate them, and sometimes even to render them intolerable. In several cases the effect of the ergot appeared to last for a considerable time, in some instances two or three days, but the dose was repeated daily in most of the cases. In order to ascertain exactly what was the effect on the size of the uterus, external measurement was resorted to every day, and twice (fifth and tenth days) the internal measurements were taken by means of the uterine sound. The result of the preceding observations tended to show that the uterine cavity undergoes a more constant and a more regular diminution in those cases in which ergot has not been employed. Involution was slower in the ergotised women. The number of cases of rapid involution was 2·5 per cent. among the ergotised women and 15 per cent. among the others. The sound showed that no diminution in length takes place within the first ten days in any cases. The author's conclusions were as follows :—1, that ergot administered during the first five or ten days after delivery does not exert a favourable influence on involution ; 2, on the contrary, it seems to hinder the physiological retraction of the uterus ; 3, that the result of numerous observations proves that involution is a contra-indication to the use of ergot ; 4, that ergot is nevertheless extremely useful in the treatment of secondary hæmorrhage, and its efficacy is greater the earlier it is used in the puerperal period.

376. *Terillon on Third Series of Thirty-five Ovariotomies.*—This new series comprises ovariotomies performed between October 1886 and November 1887, thirty-five in number, mostly at the Salpêtrière. The table comprises only cases of ablation of the ovaries for cystic disease or growths of that organ. Out of the thirty-five cases only four proved fatal, and the last twenty were all successful. The fatal cases were from exhaustion, and none from peritonitis or septic infection. They were all four in a precarious condition prior to operation, and the operation had necessitated prolonged and extensive manipulation in order to separate the cyst from adhesions.

377. *Charles on Antisepsis by means of the Perchloride of Mercury.*—The report of the Maternity Hospital of Liège for 1887 shows that 411 labours necessitated 45 operations, with 2 deaths. The first was due to uræmia, and the second to septicæmia, contracted outside the hospital. Prior to May 14, 1884, carbolic acid was used, but since that date the sublimate solution had been exclusively employed. In 1882, 1883, and the first half of 1884 there were 751 admissions, with 15 deaths, of which 11 were due to septicæmia (2 per cent. and 1·5 per cent. respectively). During the second half of 1884 and 1885–86–87 there were 7 deaths on 1,398 labours, only one of which was due to septicæmia, a mortality of ·5 per cent. Taking the general mortality, irrespective of cause, the sublimate reduced it to one quarter.

378. *Baer on a Case of Traumatic Hæmorrhage into an Ovarian Cyst: Peritonitis: Operation: Recovery.*—E. D., aged 45, married. In December 1886 she lifted the end of a heavy piece of furniture, and soon after complained of pain in the left ovarian region, which towards night became intense. The pain was accompanied by nausea and vomiting. On the following day the entire abdomen was tender, swollen, and tympanitic; but the pain had subsided. She gradually rallied from the attack in the course of a fortnight, though she still had occasional attacks of pain. Soon after this she noticed her abdomen increasing in size. She was then treated for 'dropsy and worms' by free purgation. This greatly prostrated her, and paved the way to a return of the pain, &c. Her temperature went up to 103° Fahr., facies anxious, thighs flexed. The abdomen was distended by a circumscribed mass, extending from the umbilicus to the pubes, not symmetrical, inclining rather to the left. Resonance all over the abdomen on superficial percussion, but deep percussion gave a dull note. By palpation the tumour was found to be fixed to the abdominal walls and deeply in the left pelvic region. Fluctuation could be perceived. She was operated upon on March 15, 1887. The peritoneum was firmly glued to the anterior and lateral surfaces of the cyst wall, while above, the intestines and omentum were also closely adherent. The tumour was tapped, and a thin serous fluid, tinged with blood, escaped. After a good deal of dissection the cyst was drawn out, and the short thick pedicle examined. This was ligatured and divided. The right ovary, being healthy, was left. She did well for two or three days, but her temperature went up on the third day to 103°, and on the following day to 104° Fahr. Patient complained of pain, and there was œdema of the left leg. The drainage-tube was removed, and the bowels were opened. Improvement then took place, and she sat up on the eighteenth day. The tumour turned out to be a thin walled monocyst. It was half filled with a fibrinous material, not attached to the cyst wall. The dilated condition of the veins in the cyst and the evidence of hæmorrhage within the cyst cavity, as well as around the pedicle, render it probable that rupture of the blood-vessels from stasis had taken place.

379. *Owens on Two Cases of Ovariotomy.*—Mrs. S., 79 years of age, was first seen on Dec. 2, when she was suffering a good deal of distress from an abdominal tumour, which she was anxious to have removed. She was a thin, wiry woman, of good physique. The tumour was of large size, but the uterus was freely movable. She was operated upon on Dec. 8; on the 11th the stitches were removed; on the 17th she sat up; and on the 21st she went home well. The tumour turned out to be a large parovarian cyst, bilobular, and without adhesions. Drainage was employed. Arrowroot was given instead of gruel after the operation, and caused vomiting. The incision was 2½ inches long. The second case was that of Mrs. N., aged 64, married, no children. The tumour was diagnosed to be a parovarian cyst, without adhesions, but it turned out to be multilobular, and adhesions everywhere. A drainage-tube was inserted. The patient made an excellent recovery, without a bad symptom. The operation took three quarters of an hour, and the cyst contained eight pints of fluid. The tube was removed on the ninth day, and the remainder of the stitches on the tenth. On the ninth day the patient had stout and oysters. Dr. Owens insisted on the necessity for not interfering with the bowels, which would act as soon as nature required it.

380. *Worrall on a Case of Abdominal Section with Reopening of the Wound on the Eighth Day for Purulent Peritonitis.*—E. F., aged 26, was admitted into the Sydney Hospital on Aug. 31, 1886, complaining of pain in the back, bearing down, and dysmenorrhœa. Micturition was frequent, difficult, and painful. Sexual intercourse invariably painful. These symptoms dated from last confinement, 2½ years previously. She had had two children, and suffered from *phlegmasia alba dolens* after the first, and 'inflammation' after the second The *os* was found to be eroded, everted, and lacerated. The uterus was large and heavy. A hard tender mass occupied the position of the left broad ligament, and the right ligament was thickened and tender. An operation was refused at the time, and when readmitted in October she was very much worse. The uterus was fixed in a mass of inflammatory exudation which extended halfway to the umbilicus. Abdominal section was performed on Jan. 13, 1887. The pelvic organs were found to be all matted together, but with great difficulty the left broad ligament was isolated and found to contain a cyst the size of an egg. The uterine appendages were then ligatured and removed. The hæmorrhage was arrested with difficulty. On the third day, as all discharge had ceased, the drainage-tube was discontinued. Severe shooting pain at intervals. On the fifth day pus began to flow from the track of the drainage-tube, and the tongue was dry, the temperature rising to 102°·2 at night. On the eighth day the wound was reopened and an immense quantity of fetid pus evacuated. The abdominal cavity was then thoroughly washed out and the wound closed, a fresh drainage-tube being inserted. On the second day the patient was much better, in spite of a phlebitis of the left internal jugular, left axillary, and right femoral veins. On Feb. 9 the drainage-tube was removed, and on March 26 she was discharged in fair health, pus, however, still escaping through the track of the tube. She markedly improved in health, and resumed cohabitation. She had an attack of hæmatocele on May 12. The menses appeared every month in variable quantity, and were accompanied by flushes and other nervous and vascular phenomena characteristic of the menopause. She gradually though slowly advanced towards good health.

381. *Cunningham on Extra-Uterine Pregnancy and Gastrotomy.*—Dr. W. M. Cunningham states that a lady, aged 69, the mother of nine children,

had had for twenty years a tumour in her right inguinal region. Abdominal fluctuation was present. The fluid was drawn off by the trocar. The tumour could then be felt more plainly. Supporting treatment was used. In consultation it was decided that removal of the tumour offered the only chance for life. An incision of four and one-half inches, beginning two inches below the umbilicus, was made. The peritoneum was opened, and two gallons of fluid removed. The tumour had no parietal, uterine, or ovarian attachment, and was found to be an ossified fœtus. The usual precautions and antiseptic measures were used. Shock was considerable, and death resulted six days subsequently. The writer states that in all cases of non-malignant ovarian abdominal tumours, which are movable, whose attachments are not extensive, and which have no attachment to the liver, if they have begun to develop in size, and to interfere with the proper functions of the abdominal organs, and if the vital constitution and powers of the patient are reasonably good, the operation of ovariotomy or gastrotomy for the removal of these tumours is perfectly justifiable at any age of life. ALFRED S. GUBB.

382. *Beckett on the Treatment of Mammary Sinus by Extract of Belladonna.*—In the *Indian Med. Gaz.*, January 1888, p. 10, Surgeon Beckett records a case of mammary abscess in which several sinuses remained for some time in spite of every kind of treatment, but which healed rapidly when treated with extract of belladonna. The patient had an abscess form in the left breast three weeks after parturition. This was opened and she continued nursing with the sound breast. In a few days another abscess formed and was opened, but for six weeks there remained sinuses which seemed to extend in every direction. Notwithstanding all kinds of treatment the sinuses continued discharging and the patient lost strength daily. At length she consented to wean the child, and extract of belladonna was applied to the sound breast, causing the secretion to stop promptly on the sound side, but the sinuses of the left mamma still continued to discharge, from which often a little milk came away, and thinking the irritation was due to the gland being still active, Mr. Beckett decided to apply a plaster of extract of belladonna thickly over the whole left breast. This was kept on for three days, and when taken off there was marked improvement, and in ten days the patient was quite well. The author remarks that very few authorities recommend the use of belladonna in these cases. Should he have another such case to deal with, he would wean the child at once and apply belladonna to the injured breast if the weaning did not suffice to heal up the sinuses. [In December 1886 I had a case under my care in which three sinuses had existed for nearly ten weeks, when I decided to strap the breast with belladonna plaster, and in a few days they had entirely healed.—*Rep.*]

383. *Ballantyne on Mitral Stenosis in Labour and the Puerperium.*—In the *Edin. Med. Jour.*, March 1888, p. 796, Mr. Ballantyne, M.B., contributes an interesting case illustrating the grave dangers which accompany a pregnancy, parturition, and puerperium complicated by serious lesion of the mitral valves. A primipara, aged 22, was admitted into the hospital on Nov. 6, 1884, having been in labour about ten hours. The membranes were found ruptured, and the os uteri was slowly dilating; the head was presenting in the left occipito-anterior position, with weak and ineffective pains. It was noted that the patient suffered from marked œdema of the abdomen and legs, especially at the ankles. The face was puffy, and there was venous congestion of several parts, such as the cheeks, ears, &c. The heart was enlarged, and distinct præsystolic and systolic mitral murmurs were heard. The urine was scanty, and contained 80 per cent. of albumen. The patient vomited several times after admission, and the os continued to dilate slowly. Tincture of digitalis in 15 minim doses was given every hour; the pulse was small and feeble, and there was considerable dyspnœa. Six hours after admission the os was fully dilated, and the immediate application of the forceps was advised, as the patient's condition was critical. Under an anæsthetic, with some little difficulty the forceps were locked, the child's head being brought slowly through the vulva. It was now seen that the right hand, with the umbilical cord twisted round the wrist, had been caught in the grasp of the right blade of the forceps. The child was stillborn. After delivery the patient was in a very weak state; brandy was given by the mouth, whilst whisky, digitalis, and ergotin were injected hypodermically. The uterus contracted well, and the placenta was removed in forty-five minutes. There was very little hæmorrhage, but for some hours it was necessary to give brandy freely, and 20 minims of digitalis every hour; hot fomentations were freely applied over the lungs, as they were in a state of great œdema. The symptoms never improved to any great extent, and the patient died twenty-one days after delivery. On making a *post mortem* examination it was found that the left pleural cavity contained nearly forty ounces of fluid pus, that the pericardial sac contained two ounces of thin, purulent-looking fluid, and that there were traces of slight pericarditis. The aortic and pulmonary orifices were found incompetent. The mitral valve had distinct old inflammatory thickenings on the edges, and the mitral orifice had a cone diameter of six inches. All the organs showed evidences of cardiac compensation having failed, and the effects of backward pressure on the heart, lungs, liver, kidneys, and spleen were well developed. The case is one of great interest, and is especially worthy of perusal, as the author has made a most elaborate series of sphygmographic cardiac tracings in every stage of the patient's illness.

384. *Greene on Chloride of Sodium in the Sickness of Pregnancy.*—In the *Medical Press*, March 1888, p. 239, Dr. Greene states that he has recently had two very severe cases of sickness during pregnancy. The first patient had been under several physicians, who had tried all kinds of remedies, but nothing stopped the sickness. When seen by the author she was in the seventh month of pregnancy, and very much reduced. Before resorting to the induction of premature labour, it was decided to try the effect of small doses of chloride of sodium (common salt) in chloroform water. It was given in 5-grain doses in one ounce of chloroform water. After the first dose the sickness was lessened, and by the time six doses had been taken it had entirely ceased. It was found necessary to continue the medicine three times a day up to the time of delivery. The patient had a good labour and made a good recovery. In another case a similar treatment was followed by the same result. The action of this drug seems to be accounted for by its strong antacid properties,

for in the case of both patients the secretions were very acid, yet soda, potash, and ammonia, gave no beneficial result. The author suggests that the salt be called by its chemical title when prescribed, as some patients might despise the remedy if given as common salt. RICHARD NEALE, M.D.

385. *Garrigues on a Case of Abdominal Section for Rupture of the Uterus near Term.*—The patient was a multipara, aged 32. The last menstruation was in April 1887. Last January 'she had a bad fall'; a few nights later labour pains set in. At noon next day, Jan. 21, Dr. McCanley found the head presenting, and reduced an extreme left lateral obliquity of the uterus. He replaced the uterus and put on a binder. At 4.15 the waters broke, but the head receded; at 5 P.M. the patient suddenly complained of cramps in the left iliac region, without shock. The vagina was found full of clots. Dr. Garrigues was called in and operated. The placenta lay between the anterior abdominal wall and the contracted uterus. The child was large, dead, and pale from loss of blood. The abdominal cavity contained about a quart of fluid blood and some lumps of meconium. The rent comprised the whole anterior wall and part of the posterior. 'It was eight inches long, and ran chiefly in a transverse direction between the thick wall of the body and the thin cervix. At both ends it turned downwards, and on the left side it dipped deep down into the pelvis.' The rent ran too low to allow of a Porro's operation. It was sewed up on Schröder's principle by thirty-seven antiseptic silk ligatures, deep and superficial. The peritoneum was washed out with plain water, whilst the uterine cavity was cleansed with a hot, 1 in 5,000, solution of bichloride of mercury. Unfortunately the patient lived in an unhealthy lodging-house. She was badly nursed, and allowed on one occasion to get out of bed. She died, four days after the operation, of peritonitis. Dr. Garrigues refers to important papers on rupture of the uterus by Trask (*American Jour. Med. Sciences*, 1848 and 1856), Ames (*American Jour. Obstet.*, vol. xiv., p. 374, 1881), and Harris (*Ibid.*, p. 816). At his own Maternity Hospital there has been but one case in the last three thousand confinements.

ALBAN DORAN.

LARYNGOLOGY AND OTOLOGY.

RECENT PAPERS.

386. NEWMAN, DAVID.—Observations on Seven Cases of Cancer of the Larynx. (*Glasgow Med. Jour.*, February 1888.)

387. GAREL, J.—Traitement des Polypes du Nez au moyen de l'Anse Galvano-caustique. (Reprint from *La Province Médicale.*)

388. GRADLE, H.—Hypertrophy of the Pharyngeal Tonsil. (*Journal of the American Medical Association*, Jan. 28, 1888.)

389. BLAIR, LOUIS E.—The Dangers of Hæmorrhage after Tonsillotomy. (*Albany Medical Annals*, February 1888.)

390. LEWIN.—On Laryngeal Perichondritis, with Especial Reference to the Syphilitic Form. (*Centralbl. für die med. Wiss.*, March 24, 1888.)

391. BISHOP, SETH, S.—Treatment of Chronic Suppurative Otitis Media. (*Journal of the American Medical Association*, Dec. 3, 1887.)

392. BISHOP, SETH, S.—Statistical Report of 5,700 Cases of Ear Diseases, classified by Age, Sex, Occupation and Disease; Causation. (*Journal of the American Medical Association*, Dec. 17, 1887.)

393. LUCÆ, A.—Complete Recovery of a Case of Primary Carcinoma of the Auditory Canal. (*Therapeutische Monatshefte*, November 1887.)

394. LUC, DR.—Laryngeal Tuberculosis treated by Lactic Acid and Iodoform. (*L'Union Médicale*, Feb. 16, 1888.)

395. CHABANET, M.—On Intubation of the Larynx. (*Rev. de Thérap.*, March 15, 1888.)

ART. 386. *Newman on Cancer of the Larynx.*—This paper (*Glasgow Med. Jour.*, February 1888) contains an account of four cases of this disease (two intrinsic and two extrinsic) shown before the Glasgow Pathological and Clinical Society. It also contains the sequel of three cases previously exhibited to the society. One of these, an extrinsic epithelioma (shown in November 1885), in which tracheotomy had to be performed, died eight months after that operation, of 'obstructed respiration;' no other operative procedure was justified, on account of enlargement of the glands. In another case, which was shown in November 1885 as a 'large adenoma occupying the upper part of the cavity of the larynx,' more than half the growth was removed (after tracheotomy) by means of forceps, being submitted piece by piece to microscopical examination. The first portions presented characteristics of simple adenoma; the deeper portions those of adenoid carcinoma. An enlarged gland appeared, and further treatment with forceps was discontinued. The patient died in September 1886. The third case shown before the society in May 1886 was one of intrinsic carcinoma. Tracheotomy was performed on January 14, 1886, and complete excision of the larynx a fortnight after. At Christmas 1886 a swelling on the left side of the jaw appeared, which softened and was opened, but the patient died on November 2, 1887, from exhaustion, due to the difficulty of swallowing, owing to the swelling and to the continuous discharge from the cyst. As far as could be ascertained, there was no recurrence of the tumour in the throat, nor evidence of involvement of internal organs. Dr. Newman is firmly of opinion that cancer is primarily a local disease, and so long as the system of lymphatics has not been involved he thinks it quite possible that the patient can be saved by the early performance of a radical operation. He urges the importance of medical men prevailing upon patients who may suffer from intrinsic carcinoma to submit to operation as early as possible. Partial laryngectomy he considers indicated in unilateral intra-laryngeal cancer.

387. *Garel on the Treatment of Nasal Polypi.*—This paper, by Dr. J. Garel, of Lyons (a reprint from *La Province Médicale*) contains a strong appeal in favour of the galvanic snare for removing these growths. Their removal with forceps he discards altogether, and considers that with the cold snare hæmorrhage and recurrence are more common. The author operates at several sittings, leaving, if possible, a week between each. For removing mucous polypi hanging into the nasopharynx three methods are mentioned, viz.: 1. Pushing the polypus into the nasal cavity by means of a finger introduced into the nasopharynx. Then seizing it with a hook and removing it with the galvanic snare. 2. Grasping the tumour with forceps under guidance of the

rhinoscopic mirror, afterwards guiding the galvanic loop round its pedicle by the aid of the forceps. 3. Attaching to a Bellocq's sound, which has been passed through the nose, a disinfected sponge, when, on withdrawing the sponge, the tumour is either torn off or pulled into the nasal cavity—the latter to be preferred, as removal by means of the sponge alone gives rise to hæmorrhage.

388. *Gradle on Hypertrophy of the Pharyngeal Tonsil.*—Dr. H. Gradle (*Journal of the American Medical Association*, Jan. 28, 1888) has found that more than one-fifth of the children brought to him for ear-disease suffer from this affection. He recommends a pair of forceps opening laterally with the usual curve, but the cutting end is a hollow triangle, base upwards, 17 millimètres high and 13 millimètres wide. The cutting edge is the upper base which is slightly curved and slopes backwards, so as to conform with the roof of the pharynx. Small springs attached externally to the cutting end prevent the fragments of tissue from falling into the larynx.

389. *Blair on the Dangers of Hæmorrhage after Tonsillotomy.*—Dr. Blair (*Albany Medical Annals*, February 1888) reports two cases in which alarming hæmorrhage occurred after tonsillotomy with Matthieu's guillotine. Ice, Monsel's solution, tannic acid, and nitrate of silver were used without success, and the hæmorrhage in either case only yielded to long-continued pressure. In both cases preliminary parenchymatous injections of cucaine were made. These, the author considers, a very potent cause of hæmorrhage on account of the secondary paralysing effect of that drug on the walls of the vessels. He recommends in all cases of severe hæmorrhage after tonsillotomy to apply first Mackenzie's tannic-gallic acid wash (tannic acid ʒvj., gallic acid ʒij., distilled water ℥j.), and, if that does not avail, to depend upon pressure in preference to everything else; by means of a padded stick, or long dressing forceps, carrying a wad of cotton.

390. *Lewin on Laryngeal Perichondritis, with Especial Reference to the Syphilitic Form.*—A full abstract (*Centralbl. für die med. Wiss.*, March 24, 1888) by Dr. Lublinski, of G. Lewin's paper on this subject (*Charité Annales*, xii., 1887), contains the following points. Syphilitic perichondritis was first observed by Morgagni. Amongst 50,000 cases of syphilis the author only observed 5 fatal cases, whereas the number of cases of beginning perichondritis which were treated and recovered is very large. Syphilitic perichondritis is not accidental, as Gerhardt maintains, but is intimately connected with the disease. The arytenoid cartilages are the part most commonly affected; next in order of frequency, especially in syphilis, comes the cricoid cartilages. The author distinguishes two forms of perichondritis: the primary starting from the cartilage, and the secondary originating in the soft tissues. In the former the sharp limitation of the inflammation and the swelling of the cartilages in question are important points. The course can be either regressive or progressive. In the latter, in addition to the gummatous infiltration, an osteoid transformation of the deposit is observed. A further result is a fatty degeneration of the infiltration and the formation of abscess. In secondary perichondritis the result is also either regressive or progressive, but a favourable result may be interfered with by the formation of cicatricial bands, particularly in syphilis. Another complication, especially of acute suppurative perichondritis, is œdema, which is the most common cause of death, particularly in typhus. In syphilis the author recommends general treatment combined with local, the opening of abscesses, removal of sequestra, and tracheotomy if necessary.

391. *Bishop on the Treatment of Chronic Suppurative Otitis Media.*—Dr. Bishop recommends the following plan. Cleansing the external meatus and middle ear thoroughly with injections of 1 : 10,000 solution of mercuric bichloride; inflation by Politzer's method or catheterisation; iodine vapour if stimulation is required; drying the parts with absorbent cotton and dusting them with finely pulverised boracic acid containing ½ to 1 per cent. of mercuric bichloride, or, if this should cause any unpleasant sensation, iodoform or boracic acid may be substituted. Hydrogen peroxide is valuable for cleansing the ear when there is a large amount of débris present. The author protests strongly against packing with boracic acid, and only dusts in sufficient barely to cover the suppurating membrane.

392. *Bishop on the Causation of Ear Diseases.*—From his statistics the author concludes that the excess of patients following indoor occupations is 15 per cent. of the whole number of adults. Sex has no influence in the production or prevention of these diseases during the first fifteen years of life. The preponderance of females over males at a more advanced age we, for our part, should attribute to a great extent to the fact that it is more easy for the former to attend as out-patients than for the latter, who cannot so well leave their work; but this explanation is not suggested by the author. The prevalence of naso-pharyngeal catarrh he attributes partly to the irritating effects of dust and partly to the circumstance that in business houses the *employés* work all day at a temperature of about 70°, and then, when tired and hungry, have to go out into a much colder atmosphere. In Chicago, he says, a sudden great fall of temperature accompanied with increased humidity of the air is usually followed by an increase in the number of new patients with acute diseases of the ear, and of chronic cases with acute symptoms.

393. *Lucœ on Recovery in a Case of Primary Carcinoma of the Auditory Canal.*—Professor Lucæ reports at length an interesting case of epithelioma of the external auditory meatus which recovered completely under syringing with chlorine water (changed afterwards to boracic acid solution), followed by insufflations of equal parts of pulv. herb. sabin. and alum. ust. The growth had been previously removed and recurred. The diagnosis was confirmed on microscopical examination by the late C. Friedländer. The author thinks it important that in this case the suppuration of the middle ear had only existed for six months, and that there was no evidence of any implication of the middle ear or of the bone. He recommends a trial of this powder in similar cases at as early a stage as possible. E. Cresswell Baber, M.B.

394. *Luc on Laryngeal Phthisis treated by Lactic Acid and Iodoform.*—Dr. Luc has obtained successful results by the treatment of tuberculous ulceration of the larynx with lactic acid and iodoform, recommended by M. Krause, of Berlin, and M. Heryng of Warsaw, in the case of a young woman suffering from laryngeal tuberculosis. The patient was weak and thin; the least fatigue produced dyspnœa, and, aggravated the wheezing from which she constantly

suffered. At night there was fever followed by profuse perspiration. The voice was completely lost. The patient coughed incessantly, and the sputa contained numerous bacilli. There was dulness, with moist *râles* at the apex of the left lung. The epiglottis was but slightly affected. The vocal cords were red and swollen, and could not be completely adducted; this was apparently due to infiltration of the mucous membrane covering the arytenoid cartilages, which was studded with excrescences which were especially prominent in the glottis. The appetite was poor. The patient complained of intense pain in the larynx when she coughed or spoke. A few days' rest was prescribed, during which medicinal inhalations were administered. The larynx was anæsthetised by means of a 1 in 5 solution of hydrochlorate of cocaine applied with a brush. The arytenoid excrescences were destroyed by galvano-cautery. At the end of a fortnight the eschars came away. The infiltration of the mucous membrane was considerably reduced. The membrane presented a granulating surface of healthier appearance. The vocal cords were more easily brought together, and the voice was much stronger. During six months the larynx was constantly painted with a 50 per cent. solution of lactic acid. Powdered iodoform was insufflated after each application of the acid. Under this treatment the patient recovered her voice. The stridor and laryngeal pain disappeared; expectoration diminished; nocturnal coughing ceased. Dr. Heryng, who examined the patient after this treatment, regarded the laryngeal lesions as completely healed. This method had no effect on the general tuberculous symptoms. W. VIGNAL.

395. *Chabanet on Intubation of the Larynx.*—In his thesis for the doctorate, M. Chabanet maintains that intubation is neither more difficult nor more dangerous than tracheotomy. The cannula may be permitted to remain in several weeks without serious inconvenience. The operation affords decided relief, on condition of being done by a practised hand, and not as a last resort, *in extremis*. In private practice, where the patient cannot remain under the surveillance of a skilled attendant, intubation affords no security either to the patient or to his medical attendant, and tracheotomy is preferable. He adds that, independently of croup, intubation of the larynx is indicated in cases of urgent obstructive symptoms of an ephemeral nature, and in chronic, hypertrophic, membranous, and cicatricial stenosis, and generally in all cases of impending asphyxia from pressure on the trachea. ALFRED S. GUBB.

OPHTHALMOLOGY.

RECENT PAPERS.

396. LAQUEUR.—On Striated Keratitis following Operations. (*Bericht der Ophthal. Gesellschaft*, 1887.)

397. COLLINS, E. T.—On some Complications after Extraction of Cataract. (*Royal London Ophthalmic Hospital Reports*, vol. xii. Part 1, January 1888.)

398. GUNN AND HELFREICH.—On Congenital Ptosis with Peculiar Associated Movements. (*Trans. Ophthal. Soc.*, vol. iii.; *Bericht Ophthal. Gesellschaft*, 1887.)

399. ROE, A. LEGGE.—A New Method of Testing Refraction. (*Lancet*, 1888, p. 417.)

400. MCKEOWN.—On Atrophy of the Optic Nerves Treated by Pilocarpine. (*Brit. Med. Jour.*, January 1888, p. 189.)

401. SYM.—A Case of Optic Atrophy following Chorea. (*Edinburgh Med. Jour.*, March 1888, p. 811.)

402. NEESE.—On Magnetic Operation on the Eye. (*Wiener med. Wochensch.*, No. 6, 1888.)

403. WOODS, DR. HIRAM.—On Three Cases of Hallucinations due to the Administration of Sodium Salicylate (*Journal of the American Medical Association*, March 10, 1888.)

404. FRIGERIO, DR.—On Megalopsia. (*Archivio Italiano*, November 1887.)

405. RYERSON, DR. G. S.—On Antipyrin in Acute and Painful Affections of the Eye. (*New York Medical Record.*)

ART. 396. *Laqueur on Striated Keratitis following Operations.*—It is well known that occasionally a cataract extraction, which appears at the time of the operation to be quite uncomplicated, is followed by an opacity of the cornea extending from the wound. In some of these cases the opacity takes the form of parallel or nearly parallel striæ having a vertical direction. M. Laqueur's paper deals exclusively with this striated keratitis, but in the discussion which followed other forms of opacity following operation wounds were considered. M. Laqueur considers that three grades of severity may be distinguished. In the mildest form the striæ can be seen from twenty-four to forty-eight hours after the operation by focal illumination, but they are only visible against the black of the pupil, they have a light grey colour, a breadth of 0·5 to 1 millimètre, and extend from the wound to or beyond the middle of the cornea. They persist about five or six days, and then gradually clear up. In the medium degree, which is the most frequent, the upper part of the cornea appears, even to the naked eye, to have a slight greyish hue. More careful examination shows that the opacity consists of vertical parallel striæ separated by very narrow interspaces. They appear at first sight to terminate at the lower margin of the pupil, but careful focal illumination shows that they extend nearly to the lower margin of the cornea. Crossing these vertical striæ others are often seen radiating from one point of the wound. Horizontal striæ are also met with extending from the temporal extremity of the wound. These are somewhat undulating (etwas wellig verlaufen), and can generally be seen to lie on a different level to the vertical. These opacities also clear up about the third week, but may persist longer. In the most severe form, twenty-four hours after the operation the whole cornea presents a whitish-grey appearance, the turbidity is more intense in the upper than in the lower part, and it affects both the epithelium and the substance of the cornea. At this stage no separation into striæ can be made out, and the commencement of suppuration might be suspected if it were not for the absence of œdema of the lid, chemosis, or excessive conjunctival secretion. In about forty-eight hours the opacity is less dense, and can be seen to consist of ten or twelve vertical striæ reaching from the wound to the lower margin of the cornea. Transverse and oblique striæ are also visible. Sometimes there is a fine punctated opacity of the cornea in the region of the wound, and the striæ appear to start from the lower border of this. Notwithstanding its alarming appearance the whole cornea clears completely, usually in three or four weeks, except the punctated opacity, which may in part persist, but which does not interfere with vision. By focal illumination the striæ are seen to be situated in the

deeper layer of the parenchyma. The author has only on three occasions seen an opacity of this kind after a simple iridectomy. The patients were old people, and two of the cases were complicated, the one by an adherent leucoma, and the other by dacryocystitis. The only analogous affection that occurs without an operation wound is a striated opacity sometimes seen when the eye for eight days or more has been subjected to pressure. Laqueur believes that old age is a predisposing cause of this form of opacity, and states that nearly all the well-marked cases he has seen occurred in individuals who were over sixty. He believes also that it only occurs in large wounds, and that contusion has a share in its production. It seems to have no influence on the healing of the wound. An opportunity occurred of examining the cornea microscopically in one case. The patient was a woman, aged 58, a cataract extraction was performed, without any complication. On the second day (the anterior chamber having already re-formed) striated keratitis of the medium degree appeared affecting the upper third of the cornea. The patient died suddenly on the fourth day from embolism of the pulmonary artery. The eye was removed two days after death, and was kept in Müller's fluid for several weeks (the other eye does not appear to have been examined). There was slight cell-infiltration in the neighbourhood of the wound. The lymph channels were very much enlarged, and in the deepest layers were large lacunæ. The contour of the canals was very sharply defined. In the lower part of the cornea the canals were smaller, in the upper part the separation of the corneal lamellæ was abnormally easy. The corneal corpuscles were very conspicuous, only partially filling the lumen of the canals. Nowhere were any normal nuclei visible, but they presented an appearance of fatty degeneration. Within the canals, not unfrequently adhering to the wall, were hyaline masses of various shapes. None of these bodies existed in the true corneal substance, which was unusually transparent. Professor Recklinghausen, who made the examination, considered that these changes showed an essential senile atrophy of the cornea, combined with hyaline degeneration of the protoplasmic elements and dilatation of the lymph spaces. If the tissues were to become impregnated with lymph from congestion, or any obstacle to the escape of lymph, the canals would become distended into wide tubes, which would be visible to the naked eye and give the striated appearance described. From the observations made in the discussion on this paper, it appears that striated keratitis has occasionally been seen after operations on young subjects. Becker mentioned the case of a girl of 19 who died from diabetic coma two days after a cataract operation. The lymph spaces were found dilated, as in Laqueur's case, but there was no hyaline degeneration, which renders it probable that this was only an accidental complication. Sattler has seen striated keratitis in young subjects after iridectomy and accidental wounds, and comparatively frequently following kneading the cornea after evacuation of the aqueus by puncture for the artificial production of cataract in animals. In such cases the striæ radiated in all directions from the puncture. A form of striated opacity, which appears to be distinct from that under consideration, was mentioned by several speakers. This results from the cornea being thrown into folds when prolonged pressure has been applied, and the tension has at the same time been subnormal. In these cases, however, the opacity seems to have been situated very deeply in the cornea, even if it was not limited to Descemet's membrane. Contusion of the cornea appears to favour the occurrence of striated keratitis, and it also seems to be especially prone to occur in cases of cataract extraction in which the cornea sinks in. It seems, on the whole, probable that the absorption of aqueous into the interstices of the cornea is an element in the production of these opacities, but it is not at present clear why the opacity is limited to certain lines instead of being uniformly diffused, as in the cases referred to in the next paragraph.

397. *Collins on some Complication after Extraction of Cataract.*—This paper deals chiefly with suppuration, a peculiar form of opacity of the cornea, and with increased tension following the operation of cataract extraction. Mr. Collins's position of house-surgeon to a large special hospital has afforded him unusually good opportunities for observing the progress of cataract operations, and he has collected fifty cases in which suppuration followed. These fully confirm the value generally placed upon œdema of the upper lid as an indication of suppuration; this, together with conjunctival discharge, having been noticed in all the cases. In not a single case was any useful vision retained. In six of the cases there was catarrh of the lacrymal sac, and there can therefore be no reasonable doubt that the suppuration was caused by inoculation from this. Mr. Collins doubts the remainder being due to septic inoculation, we think on insufficient grounds. The facts which he adduces as evidence against this are consistent with the view that the age and general condition of the patient act as powerful predisposing causes of suppuration, but they do not show that local infection is not also a necessary factor. Considering the facility with which inoculation can occur in the absence of special precautions, and the effect such precautions have in preventing suppuration in wounds of other parts, we certainly think that this is the more probable explanation. Apart from the fact that a lowered condition of vitality renders all the tissues less fitted to resist the growth of pyogenic micro-organisms, there are certain local conditions in old and feeble people which, it seems to us, directly favour absorption from the wound into the cornea and aqueous chamber; the cornea is not infrequently thin and flaccid so that it sinks inwards, the aqueous is re-secreted slowly, and the lymph spaces of the cornea are dilated. Five cases are given in which an opacity of the cornea followed the injection of biniodide of mercury (1 in 25,000) into the anterior chamber; there can be little doubt that this was really the cause of the opacity, since in three of the cases the cataract was extracted from the other eye with a good result. It is not stated how many times this proceeding had been adopted without any ill-results following. The opacity was diffuse, of a milky hue, and extended from the wound; in two there was a striated opacity associated with the diffuse, but the former appears to have been transient while the latter persisted. Cocaine was used in all the cases; the author does not appear to attribute any importance to this circumstance, but it is impossible not to be struck with the similarity between these cases and those described by Dr. Wood-White, in which corrosive sublimate, used as an antiseptic in five consecutive

operations on cocainised eyes, was followed by a similar opacity. It is known that cocaine increases the absorbing power of the cornea, and it is therefore quite likely that it had a share in causing the opacity in these cases. The cases of glaucoma recorded are too few to found a theory upon. Mr. Collins attributes much importance to the fact that in two out of the four cases the limbs of the coloboma and the capsule were included in the cicatrix ; in another the capsule was probably adherent, and in the fourth case this may have been so, but these complications are so frequent and glaucoma is so rare after cataract extraction that it may well be doubted whether they can be considered to stand to each other in the relation of cause and effect.

398. *Gunn and Helfreich on Congenital Ptosis with Peculiar Associated Movements.*—These cases present the curious anomaly of congenital ptosis of one eye, accompanied by an excessive involuntary upward movement of the affected lid when certain movements of the jaw are made. Gunn's case was a girl, aged 15 when seen. When five weeks old the left eyelid was observed to droop ordinarily, but to 'go up nearly out of sight' when the child was taking the breast. The ptosis gradually improved to a slight extent. When seen, the left upper lid covered a fourth of the pupil when the patient was looking straight forwards; it could be raised to a very slight extent, but only by means of the occipito-frontalis. On moving the jaw to the right (action of left external pterygoid), the lid was raised suddenly, and remained so as long as the jaw was kept to the right. This movement of the lid was more marked if the patient at the same time looked down. The jaw could be opened gently without any movement of the lid ; but this occurred directly it was projected forwards. If during the movement of the jaw the lid was held down, the contraction of the levator muscle could be felt. There was no abnormal movement of the globe. Helfreich's cases were girls, aged 14 and 17. In each there was moderate ptosis, and a powerful raising of the upper lid on widely opening the mouth and during the movements of mastication. In the elder patient there was also defective action of the superior rectus. A committee of the Ophthalmological Society was appointed to report on Mr. Gunn's case. They explained the phenomenon by assuming that the levator muscle received abnormal nerve supply from the branch of the fifth that supplies the external pterygoid. Helfreich appears to consider that in his case the movement was associated with the action of the digastric muscle, and, although he noted the fact that the movement of jaw from side to side, as in chewing, preceded the cases of the raising of the upper lid, the external pterygoid does not appear to have occurred to him. Fuchs, in the discussion on Helfreich's cases, mentioned that of a man, aged 35, in whom the left lid was raised in opening the mouth. The association of movement could be seen to a slight extent during speaking. It had existed since childhood, but there had never been any ptosis. Fränkel mentioned a similar case in a girl, aged 7. When the patient looked down and made chewing movements there was an upward movement of the right upper lid in excess of the normal action of the levator. There was no other abnormality of the muscles ; the phenomenon was believed to have been congenital, and had not altered. Helfreich came independently to the same conclusion as the committee appointed to investigate Mr. Gunn's case—namely, that the phenomenon is an abnormal communication between the nuclei of the fifth and third nerves.

399. *Roe on a New Method of Testing Refraction.*—The test consists in making the patient look at a distant object while a diaphragm, two millimètres in diameter, is passed across the pupil. In emmetropia the object will remain stationary, in hypermetropia it will appear to move in the reverse, and in myopia in the same way as the diaphragm. The test can of course be applied to any meridian. The author says that this 'is apparently a modification of Scheiner's test applied to refraction.' The slightest consideration will show that it is practically identical with that test. In Scheiner's test two apertures are used, separated by less than the diameter of the pupil. In emmetropia, since the rays passing through both meet at the same point of the retina, only one image is seen. In ametropia the pencils cut the retina at different points, so that two images are seen, one through each aperture ; in myopia the relative position of the projected images is the same as that of the apertures, whereas in hypermetropia the images are crossed relatively to the apertures. In the test under consideration, instead of using both apertures simultaneously, a single aperture is used, and moved from one position to the other, but of course this in no way affects the result. Scheiner's test has frequently been used as a test for refraction, but the usual experience is that it is inferior in accuracy to many other subjective tests, and of course cannot be compared with an objective method. W. ADAMS FROST.

400. *McKeown on Atrophy of the Optic Nerves Treated by Pilocarpine.*—In the *Brit. Med. Jour.*, January 1888, p. 189, Dr. McKeown contributes the subsequent history of a case reported in the journal of November 1884. The patient suffered from atrophy of the optic nerves and was being treated, at that time, by hypodermic injections of nitrate of pilocarpine, from July 1882. The improvement noted in 1884 steadily progressed, and in May 1887 the patient, with the left eye, could read letters of 1·5 at 4½ inches with trouble, and even make out words of 1·25 ; with the right eye he could spell 2·25 at 4 inches ; colours he could distinguish quickly. In 1882 he could, with difficulty, with either eye see fingers at a distance of a few inches, and was obliged to walk with a guide, until 1884. He is now able to earn his living as a labourer in a shipbuilding yard.

401. *Sym on a Case of Optic Atrophy following Chorea.*—In the *Edinburgh Med. Jour.*, March 1888, p. 811, Mr. Sym, M.B., records the following case, as bearing to a certain extent upon the question of the pathology of chorea. A lad, aged 17, came to the infirmary on July 11, complaining of loss of sight in the right eye. He stated that up to ten years previously he had perfect vision in both eyes ; he then, at the age of 7 years, was seized with a slight attack of chorea ; from this affection he made a good recovery, until one morning he felt a sudden mist come over the right eye whilst he was quietly walking down the ward. From that time he has never seen anything with the right eye. There was no history of severe blow or injury in the neighbourhood of the eye. When examined, vision was found in the left eye, but *nil* in the right, where there was absolute atrophy of the optic nerve. The vessels, especially the arteries, were extremely small. There were no traces of hæmorrhage or exudation, and the disc

was normally regular in outline. The conclusion drawn was that the atrophy of the optic nerve was due to an embolism plugging the *arteria centralis retinæ* of that side, whilst the boy was suffering from chorea. This view is in accordance with the embolic theory of the pathology of chorea. Such cases are very rare; Dr. Gowers records two in his *Medical Ophthalmoscopy*, and Dr. Argyll Robertson states that he has met with one precisely similar.

RICHARD NEALE, M.D.

402. *Neese on Magnetic Operation on the Eye.*—Neese has compiled a list of forty-two magnetic operations done by Professor Horner, of Zürich, in the years 1880 to 1885 (*Archiv für Augenheilkunde*, Band xviii., Heft 1), in order to form an estimate of the value of the electro-magnet for extracting iron splinters from the eye. The cases are classified according to the position of the foreign body, either in the anterior portion of the eye or behind the posterior capsule of the lens. If the splinter is firmly imbedded in a tissue (say the deep-lying corneous structure), the electro-magnet is of no use, except it is possible to remove the upper layers. The looser the foreign body lies, and the smaller and the more fragile it is, the greater is the effect of the magnet. If the splinter lies in the posterior portion of the eye, much depends on its size. One weighing more than 0·2 grammes nearly always causes the loss of the organ. The magnet will be sufficiently powerful to extract the metallic splinter if the latter is imbedded in pus, but not so when the foreign body is surrounded by tough fibrinous exudation. Consequently extraction should be done as early as possible, to prevent inflammation. The farther back the splinter lies, the more difficult is it to accurately determine its position. In every case the shortest way of access compatible with the anatomical conditions must be chosen. In 154 known cases, 30½ per cent. have resulted satisfactorily; in 17½ per cent. the sight was lost, but the outward appearances of the eye preserved; in 11 per cent. the eye had to be enucleated; while in 37 per cent. the splinter could not be removed by the magnet.

JOHN ELLIOTT.

403. *Woods on Three Cases of Hallucinations due to the Administration of Sodium Salicylate.*—After bearing testimony to the power of sodium salicylate to relieve the pain and shorten the duration of intra-ocular inflammations, on condition of being given in large doses, Dr. Woods relates the history of three cases in which hallucinations followed the administration of the drug. Case 1 was a man, aged 43, suffering from iritis, with pus in the anterior chamber. He was given twenty-grain doses of the salt, and, shortly after going to bed, he noticed a buzzing in his ears, and thought he was fighting. This hallucination was succeeded by others, but he had recovered by the following day. Case 2 was somewhat similar, in a man aged 60, who was taking twenty-five-grain doses. He had curious optical delusions, which did not disappear until the drug had been suspended at least twenty-four hours. Case 3 was a maiden lady, aged 50, with glaucoma. She, too, passed a night replete with horrors, and declined absolutely to continue the treatment. In persons with this peculiar susceptibility, tolerance does not appear to be established. Sometimes there is mere terror; at other times the hallucinations are of a harmless and non-terrifying character, but occasionally the delirium takes the form of mania, and the patient is violent.

ALFRED S. GUBB.

404. *Frigerio on Megalopsia.*—Dr. Frigerio (*Archivio Italiano*, November 1887) has recorded a case of a lunatic affected with constitutional syphilis who saw every object larger than usual. We are told that the author considered this to be the result of a physiological illusion. What this illusion is is not specified. It is difficult to understand how all objects can appear larger without any enlargement of the field of vision.

W. W. IRELAND, M.D.

405. *Ryerson on Antipyrin in Acute and Painful Affections of the Eye.*—Dr. Geo. S. Ryerson reports three cases in which he used antipyrin to relieve the pain in acute inflammations of the eye with favourable results. The three cases in which he administered it are as follows:—*Case* 1.—J. W., 58 years old. Extracted cataract Aug. 31, 1887, without iridectomy, which was followed by acute plastic iritis. Severe pain in eye and head, relieved by sedatives for a time only. There was some pyrexia and he gave three doses of 20 grains each at intervals of three hours. The relief of pain was almost magical. He had no further difficulty in relieving pain, and the inflammation seemed also to decline. *Case* 2.—Mrs. K., 50 years of age. Acute glaucoma, secondary to relapsing iritis, and exclusion of the pupil. Severe pain not relieved by cocaine and eserine, and only partially by morphine. Forty grains of antipyrin in two doses, with an interval of three hours, completely relieved her. The drug was repeated at intervals, according to the pain, for several days, when an iridectomy was performed. Patient was in very poor general health. *Case* 3.—Mrs. B., aged 44. Acute iritis, one week duration; numerous adhesions between the margin of pupil and lens. She had had several attacks without any known cause. The pain, which was very intense at night, was relieved at once by 20 grains of antipyrin. The patient had been treated for twenty-four hours previously with atropine, without much relief.

DISEASES OF CHILDREN.

RECENT PAPERS.

406. SIMON.—On Prognosis in Children's Diseases. (*Revue Générale de Clinique*, vol. ii., No. 7.)

407. MARTEL.—On Symptoms of Locomotor Ataxy occurring during Enteric Fever in a Child. (*Revue Internationale des Sciences Médicales*, vol. v., No. 1.)

408. EHRING.—On the Employment of Salicylate of Bismuth in Children's Diseases. (*Archiv für Kinderheilkunde*, vol. ix., Heft ii.)

409. TOWNSEND.—On Incontinence of Urine in Children. (*Archives of Pediatrics*, vol. iv,, No. 48.)

410. BULLARD.—On a Case of Operation for Spastic Hemiplegia in a Child. (*The Journal of the American Medical Association*, vol. x. No. 8.)

411. MCLACHLAN.—On the Treatment of Infantile Diarrhœa. (*The American Lancet*, vol. xii. No. 2.)

412. JACOBI.—On the Therapeutics of Infancy and Childhood. (*Archives of Pediatrics*, vol. v. No. 3).

413. BORELIUS.—On a Case of Umbilical Hæmorrhage. (*St. Petersburger med. Wochensch.*, No. 11.)

414. FORCHHEIMER.—On Typhoid Fever in Childhood. (*American Lancet*, No. 264.)

ART. 406. *Simon on Prognosis in Children's Diseases.*—The article is based upon notes taken of a lecture by M. Jules Simon at the Hospital for Sick Children, Paris. The author begins by point-

ing out that a correct prognosis should depend upon due consideration of the following conditions: the temperature, the pulse, the strength, the secretions, and the grouping of these conditions; further, the age, the hereditary influence, climate, season, and surroundings. A high temperature of, say, 105°·5, especially at the commencement of a disease, is of relatively minor importance in a child; a simple chill, without even a sore throat, will raise it to 104°, but towards the end of an attack a persistently elevated temperature becomes more serious. If with a high temperature the pulse also is very rapid the prognosis is grave, but if the pulse is moderate it is more favourable. Convulsions at the end of a disease, such as whooping-cough or albuminuria, is of formidable import. Suppression of urine at the commencement of scarlatina, pneumonia, nephritis, or in diabetes, is dangerous. The cutaneous is not less important than the renal secretion. If on the fifteenth day of enteric fever the skin is still somewhat moist the prognosis is favourable; offensive breath and motions, and the grouping of symptoms known as the typhoid state, are unfavourable. The prognosis in infants is much the same as in old people, for the strength is lost with equal facility in both and is regained as slowly; under twelve months even trivial affections are often fatal, but uncomplicated measles, whooping-cough, and bronchitis are borne fairly well. The principal hereditary conditions which affect the prognosis in children are alcoholism, epilepsy, insanity, syphilis, and tuberculosis. Summer is more dangerous for diarrhœa, winter for respiratory complaints. A marshy district will modify the prognosis. Finally, it must be remembered, that the chances of recovery are always greater in private than in hospital practice.

407. *Martel on Symptoms of Locomotor Ataxy in a Child.*—The subject of this paper was a girl ten years old, with well-marked symptoms of enteric fever, the typical spots of which appeared on Dec. 25, and the invasion stage of which exhibited more nervous derangement than usual, including diplopia. On the 28th it was noticed that in walking she jerked the feet forwards and let them fall back heavily, and that in other respects her gait was that of locomotor ataxy. The skin became very dry and the temperature as high as 105°, so that 1½ grains of antipyrin was given at night, and, as it had the desired effect, it was continued, notwithstanding that it seemed to produce an urticarial eruption. She was made to take plenty of nourishment throughout, and on Jan. 11 was considered cured; but, notwithstanding other evidences of strength, she was unable to walk. Two or three days later the ataxy was more developed. Besides the characteristic gait, she said she felt as if walking on cotton-wool; with the eyes closed she oscillated and fell; the patellar reflex was 'exaggerated' on both sides; the muscles reacted well to electricity, and she complained of pain in the thighs and calves. The symptoms rapidly disappeared, and on Jan. 27 there was nothing left but a little hesitation in the right leg. [The case certainly presented some ataxic symptoms, but could hardly be described as true locomotor ataxy.—*Rep.*]

408. *Ehring on Salicylate of Bismuth.*—Dr. Ehring points out that it has only recently been possible to get the above salt in anything like a pure state; the brand he uses is that of Merck, of Darmstadt. The addition of the strongly antiseptic properties of salicylic acid to the ordinary action of bismuth seemed to point to its usefulness in gastro-intestinal catarrh; but, as it is only slightly soluble, it was made into a mixture with glycerine, mucilage, and red wine. The cases treated were altogether about 200, but of these careful notes were possible only in 100. The ages ranged from early infancy to twelve years, and the conditions for which it was prescribed—and in all with more or less benefit—were dyspepsia, acute and chronic gastric catarrh, gastro-intestinal catarrh, simple intestinal catarrh, tabes mesenterica, acid diarrhœa, and dysentery in all stages. The motions especially speedily lost their offensive character under the influence of the drug. The constipation, which often succeeded the diarrhœa, was not found to contra-indicate its continued employment if other circumstances required it. Dr. Ehring ascertained that the urine gave well-marked salicin reaction soon after its administration, but on the other hand the stools failed to do so, although they became of a darker colour.

409. *Townsend on Incontinence of Urine in Children.*—Dr. Townsend divides the causes of this condition into *Reflex*, which may arise from increased quantity of urine, irritating quality of urine, vesical calculus, irritability of external genitals, of anus, or of bladder, and psychical conditions; *Atony of the Sphincter*, in connection with general debility, spinal disease, or acute febrile disease; and *Malformations of Bladder or Urethra.* To determine the ages at which physiological incontinence of infancy ceased, the mothers of 355 mostly healthy children of both sexes were questioned with the result that in 45 it was under 1 year; in 129, 1 to 1½; in 45, 1½ to 2; in 44, 2 to 2½; in 15, 2½ to 3 years. The remaining 77 had incontinence, and of this number 42 were boys and 35 girls; the incontinence being nocturnal only in 45, diurnal only in 2, and both in 28. In 63 of the cases it had continued from infancy; in the remainder it began usually before the sixth year, though in one case it appeared for the first time in the fifteenth year. No cause could be assigned for 38 of the cases; but in 18 it was due to atony, in 8 to long or adherent prepuce, in 4 to pruritus ani, in 6 to sloth and habit, and in one each to small meatus, vulvitis, and epispadias. Removal of the apparent cause, however, by no means constantly cured the disease; but possibly the long or adherent prepuce was not always the cause, as it is exceedingly common. For those in whom no very definite cause could be discovered the most effectual treatment was that by belladonna, either by the mouth or in combination with a little morphia as a suppository. Sleeping on the back must be avoided, because it favours hyperæmia of the reflex centre for micturition.

410. *Bullard on a Case of Operation for Spastic Hemiplegia in a Child.*—The patient, a boy 4½ years old, came of healthy parents, but was said to have been born with the aid of forceps, and a scar and depression over the right parietal bone were said to have been caused by them. His hemiplegic condition dated from birth; there was no history of convulsions.—June 22, 1887.—Child seated quietly in bed; expression vacant; intelligence limited, but he understands simple words and sentences, although can only say 'yes,' 'no,' and 'good-bye'; he dribbles constantly. He is well nourished, with rather a square head, on the right side of which is a scar 5 centimètres long. This lies in front of the occipito-parietal depression, and seems to cross the temporal

ridge of the parietal bone and the squamo-parietal suture, and extends forwards and slightly upwards; there is an irregular knob under one portion of the scar, and at each end of it is a depression. No tenderness. There is right internal strabismus; the right arm can be moved somewhat, but is never used; the forearm is semiflexed upon the arm, and the hand firmly flexed on the forearm. The left arm is a little more serviceable, and the grasp of that hand is good. The right lower extremity is smaller, and a little colder than the left; the foot is held flexed (*sic*) in the equinus position, with the toes pointing downwards; but the patient can flex the thigh, knee, and leg when he chooses. The left lower extremity is somewhat weak, but is otherwise nearly normal. All the senses seemed to be normal. At the earnest wish of the parents an operation was decided upon. The surgeon, Dr. Bradford, first trephined over the cicatrix, when the outer table showed a fracture, the inner a slight inequality, due to a fissure. The dura mater was thickened, but the pia mater and brain appeared normal. At Dr. Bullard's suggestion the trephining was repeated over the presumed motor area, on the opposite side, at a point a little higher and more forward than the first operation, as that was deemed to be the position of the lower and middle thirds of the fissure of Rolando. On marking the spot a small superficial scar, previously unnoticed, was observed. The cranium was normal, but on removing the bone a depression in the brain-substance—porencephalic cavity—was exposed: this, besides occupying the entire space laid bare, extended anteriorly, and altogether was estimated to be 1½ inch long, ¾ inch wide, and ⅜ inch deep; the pia was adherent and the brain-substance puckered. The pulse was so weak, and the respiration so slow and laboured, that nothing further was attempted; the portions of bone were, therefore, replaced, and the incisions sewed up and dressed. The patient never thoroughly recovered from the operation and died seventeen hours after it. No autopsy was made. Dr. Bullard, in his concluding remarks, says that in a similar case the two operations should be undertaken separately, and the earlier one should be over the theoretical seat of the disease, and not over the scar, as even when two blades of the forceps are not in question the injury to the brain may be due to *contre-coup*.

411. *McLachlan on the Treatment of Infantile Diarrhœa.*—Dr. McLachlan in this paper condemns the use of alkalies; for he considers that, by neutralising the gastric juice, they interfere with its properties and cause undigested food to pass into the intestine, and there set up irritation. For the last seven years he has relied, and with uniform success, upon treatment by acids: his favourite prescription for a child one year old is ℞ T. opii ♏x., ac. nitro-hydrochl. ♏v., syr. aurant. ad ʒij. (U.S. Pharmacopœia.) One teaspoonful every two or three hours.

412. *Jacobi on the Therapeutics of Infancy and Childhood.*—Prof. Jacobi continues his articles on the above subject, and, in the current number, deals with the treatment of the newly-born. Congenital asphyxia may be treated by letting blood from the umbilical cord, by alternate hot and cold baths, by artificial respiration—especially by breathing through a gum-elastic catheter into the child's trachea—and by electric stimulation of the phrenic nerve. Acquired atelectasis may be treated in the same way; but an efficient plan consists in closing the mouth and nostrils with the hand for from four to eight seconds. This is followed by deep and forcible inspiration by means of which the air-cells are again expanded. The after-treatment consists in frequent change of position, stimulants, and very careful feeding. The mamma of a male or female child frequently contains towards the end of the first week a little milk, which, owing to the quantity of epithelium present, is apt to find a difficulty in escaping through the ducts. As a rule the swelling gradually subsides without treatment. Pressure is injurious, and frequent inunction scarcely less so, for both increase the tendency to suppuration, and this in a female child may have very serious consequences in the future. A lotion containing iodide of potassium, extract of belladonna, and glycerine, is a useful application. Nævi are very common about the mamma, and every infant should be examined for them; if superficial, fuming nitric acid should be applied; if deep, the actual or galvanic cautery must be used.

413. *Borelius on a Case of Umbilical Hæmorrhage.*—This occurred in a child 12 days old, and the bleeding had gone on for several hours before the doctor saw the case. Notwithstanding treatment by approximation of the edges with silk sutures, death ensued. There was no history of hæmophilia or septicæmia, but the father was under treatment for secondary syphilis, and the child was weakly and its birth premature.

414. *Forchheimer on Typhoid Fever in Childhood.*—Professor Forchheimer points out in a clinical lecture on this subject that the disease in children deviates considerably from the course which is considered normal in the adult. The onset is sudden; constipation takes the place of diarrhœa, or, if the latter is present, it is slight and transitory; the nervous symptoms are more marked; the pulse is relatively slower; the complications less frequent, and the duration shorter. The author believes in the possibility of aborting typhoid fever with one or two large doses of calomel if the case is seen before the fifth or sixth day. The remainder of the treatment consists in full doses of antipyrin, dilute hydrochloric acid, whisky, and a fluid diet. If the patients beg for something to eat, he gives them tolu to chew. Cold baths are contra-indicated, as tending to collapse; but lukewarm baths may be given.

Ralph W. Leftwich, M.D.

REVIEWS.

Article 415.

Doctor and Patient. By S. Weir Mitchell, M.D., LL.D.Harv. Philadelphia and London: Lippincott Co. 1888.

This little book of an American physician, Dr. Weir Mitchell, although primarily intended for female readers, will prove both suggestive and useful to the physician, since it deals in part with the moral and physical treatment of that class of women's disease, born of unrestrained emotion or undisciplined mind, which, for want of a better name, we know as 'Nervousness,' of which the management and even the very existence are ignored in most systematic treatises, although the existence of the affection is only too painfully obvious to both the sufferers and their physicians.

We agree entirely with the advice given and the warnings offered to the sensible nervous patient,

who consults and trusts her doctor in all her troubles from this cause. There is no doubt about it, that in the hands of the wise, firm, and judicious physician, who makes the patient understand the causes of, and the remedies for, her condition, the cure is half completed when it is commenced. It is unfortunately, as our author hints, the 'sympathetic' medical attendant (using the epithet in its false sense) who is the father, or at least the foster-father of 'nervousness.' We recognise the portrait of that class of physicians whose representative is described as 'oh! so sympathetic!' 'the man who goes about his work with a pocketful of banal phrases calculated to soothe and comfort the craving of the wretched.'

Unfortunately it is too few women who, like Dr. Weir Mitchell's Quaker lady, have the shrewdness to see through the sham sympathy of these men. The Quakeress, after a consultation between her own doctor and one of this class, said to the former, 'Thee will do me a kindness not to ask me to see that man again. Thee knows I don't like my feelings poulticed.' For the most part, however, we fear that the humbug has the best of the competition with his honester brother. We heard an anecdote lately of a lady who, having suffered much both in pocket and person from one of these gentry, went, on the advice of a wise friend, to consult a Scotch specialist, who is more noted for skill in his profession than for pleasing manners. At the conclusion of the interview he summed up his opinion thus:—'In my opinion ye've just naething at a' the matter with' the organ in question. Somewhat troubled and startled, she called to tell her original attendant the words of the specialist. He heard her quietly to the end, smiled his sympathetic smile, and completed the subjugation of his patient by the following sentence:—'Oh, my dear madam, if Dr. D—— had suffered what *you* have, he would not have said that!'

The warning, too, against that other weak class of physicians which, from sheer kindness of heart and dislike to see or inflict pain, lets its patient drift into the chloral or morphia habit, is one for all of us to take to heart. Dr. Weir Mitchell gives us a beautiful and touching picture of a woman's life, the opposite to these ease-seeking ones—a high ideal, which it were well if more women could set before them. 'I recall one woman who, for years under my eyes, was the subject of what, with due sense of the force of words, I call torture. At times she shut herself up in her room, and, as she said, "wrestled with it." This happened every day or two for an hour or more. The rest of her time she was out, or busy with her duties, but always in some pain. Meanwhile, although fading slowly, she was the life and joy of many, the true and gentle counsellor, the sure support of all who leaned on her for aid. At her dinner-table, in chat with her friends, or over a book, no one who did not know her well could have dreamed that she was in such pain as consigns lower natures to disability. Her safeguard from utter wreck was a clear and resolute faith, a profound and unfailing interest in men and things, and books, which gave strange vigour to her whole range of intellectual activities. But, above all, she possessed that happiest of gifts, the keen undying sense of the humorous, the absurd, and the witty. . . . Very irritable in youth, her clear brain and strong sense of duty overcame it in proportion to the growth of what in others creates it. . . . Surely such a life is a fruitful lesson in the uses of endurance, for be sure that both she and all around her were the better and happier; yes, and she the less of a sufferer for her mode of dealing with a life of pain.'

For Dr. Weir Mitchell's remedies for Nervousness, from Rest and Lessons of Self-Control to Outdoor and Camp Life, we must refer our reader to his own book.

Having said so much in heartiest praise, we must own that there is one portion of the work from which we most strongly dissent, and that is the part dealing with the higher education of women. Our author, while never openly opposing this sort of mental culture, evidently is quite as much prejudiced against Women's Colleges as in his opinion their professors and students are in their favour. There is a veiled tone of opposition running through his treatment of the whole question, which, while perhaps not definite enough to challenge controversy, will yet probably have much weight with the mothers into whose hands the book is intended to fall, in shaping their decisions upon the subject of the education of their girls. It is true that our author protests that he would not forbid to women any profession or mode of livelihood whatever. Under certain conditions even a college education might be permissible or perhaps desirable; but his exceptions are so numerous, the dangers he foresees are so great, and the penalties, both physical, æsthetic, and social, which he threatens are so severe, that few women will rise from reading this section without having registered a mental vow that no daughter of theirs shall ever set foot in a ladies' college. 'If we take the mass of girls, even of mature age, and give them the training commonly given to men, they run grave risks of being injured by it, and in larger proportions than their brothers.' 'If she be the least degree nervous or not well, a resolute "No!" must be said to her claims for a higher education.' 'Let no prudent mother suppose that in these collections of persons of one sex her child will be watched as she has been at home.' Dr. Weir Mitchell 'utterly distrusts the statistics of these schools and their graduates as to health.' The machinery of organisation for the care of the mental and moral health of the student 'does not work satisfactorily, he is sure, from the many cases he has seen of women who have told him their histories of defeat and broken health.' And finally, even in those few cases where he acknowledges that residence and education in a woman's college will produce no harmful physical results, he threatens consequences even more distressing to every prudent mother. 'There are,' he says, 'careers now sought and won, and followed by woman, which for man inevitably lessen her true attractiveness, and make her less fit to be the "friendly lover and the loving friend." For most men, when she seizes the apple she drops the rose.' This latter allegory is, however, capable of another interpretation to the one Dr. Weir Mitchell intends it to bear. His apple may quite as well symbolize material food as knowledge, or it may and does represent both. If human beings were always linked together in male and female couples, the man carrying the apple, the woman wearing the rose, things would no doubt be very satisfactory, since a mutual sniff or an alternate bite would satisfy all requirements. But since by anti-marriage prejudices, university regulations, underpayment of female labour, and the like, man has hitherto kept the apple pretty well to himself, only extending it,

like the sceptre of Ahasuerus, to some exceptionally favoured woman, and, unlike Ahasuerus, declining to maintain in luxury and idleness the others whom he finds unattractive. And since the scent of the rose, metaphorical or actual, will not satisfy the cravings of either an empty stomach or an inquiring mind, nothing remains for woman except to stoop and pick up the apple herself, even at the risk—not, we think, a great one—of letting her more ornamental flower fall. But is Dr. Weir Mitchell correct in tracing many cases of nervousness to the education imparted in women's colleges? It is true that a certain proportion of patients of the kind may come from such institutions, as they do from all places where women most do congregate; the abuse of every system has its victims; but under ordinarily wise direction as to hours of study, exercise, and fresh air, there is certainly less reason to expect the development of nervousness in the well-filled, disciplined minds of educated women than in the frivolous and vapid ones belonging to the class called 'society girls.' The double aim of these latter is the pursuit of pleasure—and of husbands. With minds alternately excited to the highest pitch, and depressed to the lowest depths, unaccustomed to bear pain or deny themselves pleasure, the necessary suffering and restrictions of married life react injuriously on their uncontrolled emotions, and in fancied ailments and obsequious doctors they indulge that morbid love of excitement which is prevented from satisfying itself in other spheres. If woman is taught to look on marriage as the sole opportunity of happiness or path of honour and comfort, she is certainly in danger of making one of those unhappy marriages to which Dr. Mitchell traces so many cases of nervousness, rather than remain in the unhonoured estate of single life. Or, in the event of being unable to satisfy her ambition to marry, she too often spends the remainder of her days in useless repining or in vain regrets. Our author would allow woman to receive 'whatever in the loftiest training helps to make her as mother more capable, as wife more helpful.' But since in our modern civilisation either of these positions is an impossible one for many thousands of women, that education is surely the wisest which teaches woman to look on marriage as a happy possibility, exactly as a man sees it, but teaches her also that it is not the real end and aim of her life; that her true mission lies in raising the tone of others, in helping the weak and fallen, in bettering the world; that knowledge is necessary both as a means and as an end; that an unmarried woman may pass through the world useful, happy, and wise, if she but cultivate the talents which God has given her; that for her, nervousness need have neither personal meaning nor terrors; and that if, instead of a single life, she be called to the enjoyment of a married one, her knowledge that two and two make four will render her neither a worse mother nor a less desirable wife.

We believe emphatically that what Dr. Weir Mitchell says on the subject of the higher education is exaggerated and untrue, but if every word and every warning of his were to be implicitly believed, we think the supporters of female education might still quote against him the beautiful lines of Philip Varley, which he uses with another purpose :—

> Alas for thee, if thou from thine own soul dost
> turn and flee!
> Better the house and company of pain;
> Better distress;
> Better the stones of strife, the bread with tears;
> Humiliation, and despair, and fears—
> All, all the heart can suffer, the soul know,
> Rather than with the bestial train to go,
> With base rejoicings, ignorant of woe.

For our own part, we like the chapters on the 'Physician' and on 'Convalescence' the most of any in the book. Dr. Weir Mitchell has an almost French turn for epigram, which occasionally gives sudden pleasure, as in the following instance :—'There are, indeed, diseases which can only be helped by heroic remedies, but in this case, were I the patient, I should like to be pretty certain of the qualifications of my hero.' He gives us one or two good anecdotes also :—'I once expressed surprise in a consultation that an aged physician who had called me in [to see a sick child with him] should be so desirous of doing something when I as earnestly desired to wait. At last he said, "Doctor, it is not the child I am anxious to dose, but the mother's mind."' On the presence of an observant tone of thought in the physician, the following is good :—'Meeting the late Professor C. D. M. on the steps of a house where, the day before, we had seen together a woman critically ill, he said to me, "Mrs. B. is better, doctor; much better." "How do you know that?" I returned. "Her windows are open, my dear doctor; she wants more light. She must be better, much better." And so she was, as it proved.'

It is interesting to note that, although the specialist is still viewed with a certain amount of suspicion and dislike by the general physician and surgeon, he is much better accepted by them than was once the case. Dr. Weir Mitchell merely warns his readers against the narrow and incomplete view of things taken by certain specialists, but this he declares to be the fault of the men and their training, and not of the system of specialties which has become invaluable. The older men made no secret of their contempt and dislike to specialists. This is Liston's opinion of aurists in 1840 :—'Such is the division of labour in these days, that a distinct profession is founded on the operation of squirting water into the external ear. It is true that other operations are talked of by these aurists, as they style themselves, but the advantage to be derived from any of them is very doubtful. . . . They even go so far as to recommend mercurials to correct the state of the chylopoietic viscera, the assistant chylopoietic, and the whole of the digestive organs, upon derangements of which, say they, many cases of deafness depend. The fools who apply to such charlatans certainly deserve to have their pockets well drained, but ought scarcely to be poisoned by them.' Our view of the position of specialists is that they are invaluable if properly used. They occupy the position of works of reference, and, like these, are only safely and usefully consulted after referring to the index—the wise and accomplished general practitioner.

There remains much in the work worth noting, but space forbids any further criticism. Nothing shows the rapid advance of the American republic better than such a little book as this. A poet, novelist, and physician, a graduate of that university whence Waterhouse wrote to Lettsom, scarce eighty years ago, to describe the modest commencement of a library and some scientific classes in it, practising in that same Philadelphia whence Rush deplored his absence from the centres of European culture, has to deal with forms of disease, for the most part

the outcome of habits of luxury and of general wealth. In no other country in the world has the advance from rude forms of civilisation to the most refined and advanced culture been so rapid or so complete. Whether a tree of such a rapid growth will have a long and healthy period of existence is a problem for the future.

ARTICLE 416.

Inebriety: its Etiology, Pathology, Treatment, and Jurisprudence. By NORMAN KERR, M.D., F.L.S. H. K. Lewis: 136 Gower Street, W.C.

THIS exhaustive volume will undoubtedly commend itself to the medical profession as a standard book of reference on this unsatisfactory subject.

In limine we would especially commend the arrangement of the book. By reading the table of contents the reader not only extracts an analysis of the whole volume, but also is directed to the most practical of minute details, which will be of real service to him should he be bold enough to attempt any therapeutical efforts with regard to the habitual or non-habitual drunkard.

We cannot help thinking that rather too much stress is laid upon the fact that drunkenness is a disease. Granted that it is so in its chronic states, we must nevertheless protest against this view in its earlier stages, where vanity, exhaustion from dissipation, a love of imitation, and idleness, often constitute the first elements of its causation.

There is a stamp of truth about the book which is truly admirable. Scarcely a case is quoted which any one of us who has been long engaged in active practice can fail to identify as being very similar to one we have met with either under our own care or under our own observation. It is refreshing to find that the insanity of delirium tremens is classed as a mental disease, and we trust is intended to be treated with incarceration in the same way as any other form of acute mania. The consequences are just as serious to society; and why, therefore, should the prophylactic treatment differ simply because we think we are bound to split straws with regard to nomenclature?

Mania *a* (or *e*?) *potu* is said to be 'a transient acute mania,' and we infer should also subject the victim to legal restraint.

Passing on to the end of Chapter II., it is well to note that the author's term 'Narcomania' is defined to be a mania for 'narcotism of every kind, an inexpressibly intense involuntary morbid craving for the temporary anæsthetic relief promised by every form of narcotic.' This, as we stated above, we believe only to exist in chronic and not in recent forms of alcohol, opium, chloral, or other stimulating or sedative conditions of poisoning from the abuse of drugs.

In Chapter III. Dr. Norman Kerr says, 'We may class inebriety under two heads, and divide inebriates into two groups.

'Inebriety may be periodical or constant, and inebriates may be periodic or habitual.

'Passing on to statistics, we find that of 600 admissions to the Home for Inebriates at Port Hamilton, New York, 242 were periodic inebriates; and of 103 admissions to the Home of Inebriates at Rickmansworth, there were 45 of this class. There was, therefore, a larger proportion of constant than of periodic drunkards.' An important note is here made of the functional periodic inebriety of women. Periodicities may exist, moreover, in the male, may be regular, irregular, weekly, fortnightly, lunar (?) or four-weekly, occasional, commercial, climatological, habitual, social, unsocial, neurolytic, insane, syphilitic, traumatic, or may occur after sunstroke, nerve shock, or operations.

The forms of inebriety may also be correspondent to inebriating agents, as from alcohol, opium, chloral, chloroform, ether, wine, beetroot-, corn-, or potato-spirit.

'Acute alcoholic diseases generally run their course within fourteen days, although sometimes they last longer,' writes Dr. Kerr. The writer's experience is that true cases of *mania e potu* have a duration of from two to three days, but that it is not safe to allow the patient to be discharged from the asylum under at least three weeks.

Dr. Kerr wisely says that 'acute is apt to be consolidated into chronic inebriety, the transition being often so gradual that it is impossible to mark the boundary line.'

Chapter XII. deals with the treatment of this unfortunate malady in an able and exhaustive style. Dr. Kerr unhesitatingly recommends the immediate and total withdrawal of all forms of alcohol both in alcoholic insanity and delirium tremens. Passing on to drugs, we find sal volatile, tincture of nux vomica, tinct. cannabis indicæ, tinct. hyoscyami, tinct. gentianæ co., tinct. cardamomi, tinct. calumbæ, tinct. cinchonæ co., and other cardiac stimulants capitally arranged in elegant formulæ. But, may we ask, are not these, or some of them, alcoholic stimulants, although not perhaps so grateful to the palate as those usually employed by the moderate drinker? Far be it from us, however, to criticise any form of treatment or any drug that may be employed in the alleviation of this horrible malady.

All we stipulate for is that we should be true to our colours, and confess that although, in some cases, the withdrawal of the more seductive form of alcohol may be necessary, we should not agree to the withdrawal of less fascinating stimulants, should long habit, and possibly some cardiac inefficiency, call for their exhibition in smaller doses at less frequent intervals.

Excellent advice is given in Chapters XIX. to XXIII. with regard to Alcoholism in its Medico-Legal Aspects, which may well supplement the capital epitome to be found in Churchill's Medical Directory.

The reporter, some years back, in the *British Medical Journal*, stated that, in his opinion, there ought to be two classes of habitual drunkards; one who should place themselves voluntarily under control, and a second who should be treated as irresponsible persons and incarcerated, whether they were willing to submit to treatment or not. Much misery and squandering of the money of innocent relations would be saved if these measures were adopted.

In conclusion, we heartily recommend Dr. Norman Kerr's work to our readers, being assured that by its innate worth and excellence of arrangement they will be assisted in the management of those more complicated cases of inebriety which they are often called upon to treat from both a medical and a medico-legal standpoint.

HENRY SUTHERLAND, M.D.

Article 417.

Medical Lectures and Essays. By Geo. Johnson, M.D. Messrs. Churchill. Pp. 872.

The custom, nowadays not uncommon, of republishing in a collected form some of the papers and lectures given to the public in previous years, when undertaken by an author such as Dr. George Johnson, who has thought out many questions for himself, is one which we could wish were even more widely adopted.

Many of his clinical lectures on common diseases will be widely read and appreciated, and there is much that is worth remembering in the theories put forth in some of the essays. The main idea dominating the whole work and applied to the explanation of many of the phenomena of disease is the important *rôle* that is played both in health and disease by the muscular coats of the smaller arterioles. The author discusses in numerous essays the diseases and symptoms which he considers depend upon the affection of the arterioles of the various organs of the body. Thus epilepsy is supposed to be due to spasm of the cerebral arterioles, rigors to spasm of the spinal vessels, collapse to spasm of the pulmonary.

In an early chapter the phenomena of asphyxia or apnœa are carefully discussed, and it is shown that when experimentally produced in animals the arterial pressure rises, then the left auricle and ventricle become over-distended; later on the pressure falls rapidly, and the cavities of the left side of the heart empty, while the right auricle and ventricle become intensely distended, and finally the animal dies; in several diseases we find the same sequence of phenomena.

In cases of chronic apnœa the œdema and engorgement of the lungs are probably due to a dilated condition of the bronchial arteries, which send additional blood to the lungs when there is a deficient supply from the pulmonary.

The auther considers that the collapse of cholera and the dyspnœa in asthma are due to spasm of the pulmonary arterioles, and a consequent paralytic distension of the right auricle; in spite of *post mortem* evidence, which shows that right-sided cardiac dilatation is often not found in cholera cases which have died with collapse.

Strongly in favour of his view is the marked improvement which at once takes place in cases in which venesection or injection of warm salines into the veins has been performed.

Abundant evidence is adduced to show that cases of cholera with little vomiting and purging are more malignant and more rapidly fatal than those in which they are prominent symptoms, and cases of cholera treated by opium and astringents are more apt to run on to collapse than those treated on the evacuant plan. In fact, not one of his cases of choleraic diarrhœa so treated has become collapsed.

The argument throughout the chapters on cholera is that the cholera poison is the cause of the collapse, diarrhœa, cramps, &c., and that castor-oil is a much more suitable drug than opium, so that the poisonous products may be quickly eliminated. The condition of collapse often produced by poisoning with muscarin, tinned lobsters, decayed cheese, mushrooms, &c., would be similarly explained.

In the chapter on overwork and anxiety many instructive cases are adduced which recovered completely after a few nights' good rest induced by hypnotics.

There is an instructive collection of ten cases of poisoning by the homœopathic solution of camphor. This solution is seven times the strength of the Pharmacopœial preparation, and the danger probably arises from the camphor being precipitated in fine particles in the blood. It is clearly shown that so far from being a harmless preparation it may in incautious hands be most dangerous.

The author considers, in the absence of direct contagion, all cases of membranous pharyngitis or laryngitis afford conclusive evidence of sewage poison, and will not allow of the existence of a non-infectious croup.

Among the many papers on laryngeal subjects by far the most important is the one on a case of bilateral paralysis of the larynx from pressure on one vagus, of which four other cases have now been recorded. An aneurysm compressed the left vagus and left recurrent laryngeal nerves, and both vocal cords were paralysed close to the middle line. It is now clearly established that pressure on one vagus will cause bilateral spasm or paralysis of the vocal cords, while pressure on the recurrent laryngeal nerve causes a unilateral affection.

As the result of the examination of a number of healthy chests it was shown that the vocal resonance and tactile vocal fremitus is usually better marked at the right apex, but that the percussion note and breath sounds are fairly equal at the two apices.

The latter portion of the book is a treatise on chronic Bright's disease, and discusses fully the anatomy of the kidney and contrasts the various modes of testing for albumen and for sugar.

Picric acid often gives a deposit at once with albumen when nitric acid fails to show any; and for simplicity it is also to be preferred in testing for sugar. It also forms an efficient means of estimating them quantitatively.

Much valuable experience is here recorded on these diseases, and some cases of albuminuria persisting for years are related; but the most remarkable is that of a medical man who had scarlatinal dropsy at the age of 17, and for the remaining thirty years of his life had albuminuria, but was to all appearances in good health. Recovery after albuminuria has persisted one, two, three, and in one case seven years has been the good fortune of some patients; so that if a patient is in good circumstances the prognosis is not so assuredly bad as it is usually considered to be.

Considerable space is occupied with valuable hints on treatment, and the book, which represents the mature results of a long and extensive experience, should command a wide circulation.

G. N. Pitt, M.D.

Article 418.

On Aphasia. By J. Ross, M.D. London: J. & A. Churchill. Pp. 128.

This is a most able and clear exposition of the varieties of aphasia and their cortical localisations from the author's point of view. One excellence of the book—viz., the full manner in which the illustrative cases are given, which is necessary in reporting aphasia—makes it impossible to condense them with advantage.

The author divides the cases into those with—

1. Motor aphasia, in which a patient can under-

stand what he reads or what is said to him, and can perform all the general movements of the tongue and lips, but is unable to articulate a syllable. Loss of power to communicate thought by articulate words is designated aphemia; by writing, agraphia; by pantomime, amimia.

2. Sensory aphasia. *a.* Word-blindness, *i.e.* a patient can see, but cannot understand what he reads. *β.* Word-deafness, *i.e.* a patient can hear noises, but does not understand what is said to him.

3. Combinations of these symptoms.

These symptoms may be due to a functional lesion, especially epilepsy; or they may be due to any organic lesion affecting certain defined areas of the cortex, and by far the most common lesion is embolism.

Aphasia is almost always due to a lesion of the left side of the brain, although in exceptional cases, generally in left-handed people, the lesion has been upon the opposite side. The lesion producing motor aphasia is in the posterior part of the third frontal convolution for speech, and in the second frontal for writing. Word-deafness is localised in the first and second temporo-sphenoidal convolutions, and word-blindness in the angular gyrus. The whole of these areas, it will be noted, are supplied by the middle cerebral artery.

The subject is, however, not so simple as the above analysis would suggest, as there are different degrees of each affection. There are varying degrees of aphemia, *e.g.* a patient may mispronounce or misuse words, his speech may be limited to a few phrases, or he may be reduced to monosyllabic answers, or to one or two words with which he replies to every question, so that he is speechless but not wordless.

In the same way there may be varying degrees of agraphia; in some there is a loss of power to write voluntarily, while the power of copying is retained; in other cases a figure cannot be copied.

Again, there may be merely a misuse of a word; or a patient may be unable to recollect a word, and will replace it by another; or a patient may be reduced to gibberish. Paraphasia is the term applied to the misuse of words, and is most marked with sensory lesions.

The explanations of other authors are alluded to, and it remains to be tested by experience whether the present scheme is sufficiently comprehensive to meet the many varieties of aphasia met with in practice. It is readily comprehended, especially when compared with the elaborate systems of some Continental authors.

G. N. PITT, M.D.

ARTICLE 419.

Transactions of the Academy of Medicine in Ireland. Vol. V. 1887.

THE papers in this volume are of very varying merit, but several are of great interest.

Dr. Foot reports a case of narcolepsy. The patient for some years was in the habit of falling asleep every afternoon between 2 and 3 P.M., whether he was sitting, standing, or walking about, quite irrespective of meal times. Treatment had no effect.

Dr. Monillot records an epidemic of eighteen cases of diphtheria in a school, of which two died, two had paralysis, in three the larynx was affected, and the remainder recovered without any after ill effects, but in all the period of convalescence was very long. Only eight cases had membranous pharyngitis, the remaining ten looked like follicular tonsillitis, in eight of which the glands were swollen, but the symptoms were mild. One of these cases developed palatal paralysis. These cases show that diphtheria and membranous pharyngitis are by no means synonymous.

Dr. Boyd contributes some notes on the mineral springs of Auvergne, and Mr. Wheeler on conservative surgery of the foot and ankle-joint.

There is a most valuable paper on resection of the pylorus by Mr. M'Ardle, in which the experience of Continental operators is classified and discussed. Of 903 cases of cancer of the stomach, 290 occupied the pylorus, and were not complicated by enlargement of glands, spreading infiltration, or adhesion to adjoining viscera. Hence a quarter of all cases of cancer of the stomach come within surgical aid, and in several cases the patients have lived four or five years after the operation. The experience of all the operations suggested, except pylorectomy, has been most unfavourable. The fatality of the operation is proportional to the amount of adhesions: if the pancreas is adherent its secretions digest the wound-border; if the omentum, there is usually sloughing; and if the colon, gangrene of the bowel. The various incisions which have been made in the stomach are discussed, and the absolute necessity of avoiding pouching when the edges are reunited is emphasised.

Mr. W. Thomson, in describing a case of colotomy, draws attention to the fact that the jejunum sometimes is the coil of intestine which first protrudes at the lumbar wound.

Mr. Franks reports a case of extensive colloid carcinoma of the stomach.

Dr. Foot describes a very rare case of abdominal aneurysm in a woman, of which the author has only been able to collect sixteen other cases; and also a heart from a man of 21 in which there was a small congenital deficiency in the undefended space of the ventricular septum.

An exhaustive paper by Dr. Grimshaw, the Registrar-General for Ireland, on the prevalence and distribution of phthisis in Ireland is a valuable contribution to a subject of which we know but little at present.

G. N. PITT, M.D.

ARTICLE 420.

The Fundamental Principles of Chemistry. By ROBERT GALLOWAY, M.R.I.A., F.C.S. Longmans, Green, & Co. 1888.

VIEWED as an educational work, this treatise is a new departure. Instead of presupposing a knowledge of elementary physics, the author has devoted more than half of his 356 pages to the exposition of so much of physical science as is essential for the due comprehension of chemical laws and theories. Both the physical and chemical portions of the work are treated experimentally, the descriptions of experiments being illustrated by woodcuts, but these illustrations appear to be less numerous in the purely chemical part.

Another feature of the book, which adds greatly to its value for the teacher, is the presence at the close of each chapter of a set of questions upon its contents, the answers to which are found in a key at the end of the volume. There is no index to the work, but it is provided with a good table of contents.

A curious error of the press occurs on p. 244, where the 'atomic volume' column has been entirely

inverted. In this table, it seems unnecessary to give the specific gravity of the *molecules* of the elements, after giving that of their *atoms*.

The descriptions are clear and the teaching sound and thorough, and the book seems to have been written even more for the benefit of the teacher than for that of the student, though it is apparent from some of the directions given that the case of the self-instructed student is borne in mind.

Mr. Galloway's work will be welcome to many on account of the originality of its plan, and the evident thoughtfulness and care expended in its compilation.

G. Stillingfleet Johnson.

Article 421.

The Medical Digest. By Richard Neale, M.D. Ledger, Smith, & Co., St. Mary Chambers, St. Mary Axe, E.C. 1888.

The appearance of a cheap issue of Dr. Neale's *Medical Digest*, with the Appendix 1882–86, is calculated to recall the feelings of admiration which were caused by this exhaustive work on its first appearance. When one reflects that the indices contain more than 13,000 references, and the book itself 200,000 distinct entries, some idea can be formed of the magnitude and scope of the undertaking. For practical purposes a simple reference to the *Digest* will often give all the information needed, and there are but few practitioners who have not by them a series of one or other journal to which to refer, should more detailed information be required. It is not only to the literary man that the fund of information therein contained is of use ; the hard-worked practitioner also is enabled to post himself up in the various methods of and suggestions for treatment of every disease, complaint, and ailment within the scope of medicine. A few minutes' attention, in the beginning, devoted to the comprehension of the general plan of the work will enable the reader to turn without a moment's hesitation to the page and paragraph bearing on the required subject. To men living in out-of-the-way places this compilation must needs be invaluable ; it is, indeed, the doctors' bible, and it is not only as a guide but as a reference book, *vade mecum*, and companion that the claims of this work to popularity are based. In fact, no medical library, public or private, can be considered complete without it.

Article 422.

The Life and Letters of Charles Darwin. Three Vols. London : John Murray. 1888.

The life and character of Charles Darwin are of such paramount interest to scientific workers in every profession that we do not hesitate to notice rather fully in these pages the record of the life which will probably largely influence our work in the future. Recently the example of Darwin's patient search after scientific accuracy and truth has been impressed upon students and teachers by such a Nestor in our profession as Sir James Paget,* and the principles which Darwin enunciated are being applied to the study of pathology in the lectures before the Royal College of Surgeons,† and the bearing of the same principles has given rise to other papers upon allied subjects, ‡ and more remains to be done in the same direction.

But the interest we are likely to take in his life and letters is partly because his early associations and training were in the medical profession, and partly because the same care and originality of inquiry into apparently simple phenomena are wanted in every student. These impelling powers require to be developed and encouraged from the earliest times, and it would be difficult to find a record of a life so impressive as this in its scientific search for truth, and it would be difficult to find letters more interesting and typical of what genial, unselfish, kindly, and yet truly scientific letters should be. It is not a matter of surprise, considering what Darwin's character was, that his letters are so much to the point, but there is a hearty naturalness in them which makes them bring the man before us in a manner which few biographers can do, and the public owe a debt of gratitude to his son for the work, and especially to Sir Joseph Hooker Darwin's most cherished friend and fellow-worker, for preserving letters which here help us to see truly this hero of science.

First of all in the relation of Charles Darwin to the medical profession comes the fact of his father having been a successful practitioner, and although Darwin is not inclined to consider that his father's influence was great in determining his taste for natural science, we think there was more in this than at first sight appears. His intention at one time and for long evidently was that Charles Darwin should follow the same profession, and at Shrewsbury, where the father practised, it was expected that he would (at some time) settle there. And his father gave him many useful hints as to practice, and talked much about his patients Dr. Darwin was a rather remarkable man, and the reverence and affection which his son always showed for his memory were very striking. 'My father, who was the wisest man I ever knew,' generally was the kind of preface to some anecdote he would tell of him, and his faith in his father's medical instinct was striking—the more so as he put small faith in doctors generally. Dr. Darwin had no great powers of generalisation, but he was a careful observer of nature as well as of humanity, and this faculty of observation must have influenced those whom he wished to teach, as he did his children. A large, rather unwieldly man, he was often credited unjustly with being an excessive feeder, and capable of taking wine as largely as was common in those days, but in reality he was a spare feeder and had a horror of stimulants, which his son also inherited.

Dr. Darwin himself is stated to have never taken a drop of any alcoholic fluid, but it is interesting to note that he had the habit, which has recently become a fashionable form of treatment, of drinking hot water at meals, and the butler used first to put some cold water into a tall tumbler and fill it up with boiling water at the table, a process which rather naturally suggested that the mixture was something stronger than water.

Among the accounts he gives of Dr. Darwin's judicious sense and means of success with patients, he says that 'ladies often cried much in telling him of their troubles, and thus caused much loss of his precious time. He soon found that begging them to command and restrain themselves always made them weep the more, so that afterwards he always encouraged them to go on crying, saying

* Address on 'Scientific Culture.'
† Bland Sutton on 'Evolution in Pathology.'
‡ Le Gros Clark in *Journal of Anatomy and Physiology* on 'Evolution and Affinity in Disease.' Mitchell on 'Dissolution and Evolution and the Science of Medicine.'

that this would relieve them more than anything else, and with the invariable result that they soon ceased to cry and he could hear what they had to say and give his advice.' He gave one day an odd little specimen of human nature. When a very young man he was called in to consult with the family doctor in a serious case, and took a much more hopeful view than the more experienced medical attendant, and proved quite wrong and owned his error. 'He was then convinced that he should never again be consulted by the family; but after a few months the widow sent for him, having dismissed the old family doctor. My father was so much surprised at this that he asked a friend of the widow to find out why he was again consulted. The widow answered her friend that "she would never again see the odious old doctor, who said from the first that her husband would die, while Dr. Darwin always maintained that he would recover."' We cannot accept this, however, as an invariable rule of successful practice, though he was evidently struck by the advice of another patient—'You are a very young man, and allow me to advise you always to give, as long as you possibly can, hope to any near relative nursing a patient. You made me despair, and from that moment I lost strength.'

Charles Darwin inherited his father's repugnance to the sight of blood and his extreme sensitiveness, and hated anything like cruelty. And there is no doubt he inherited also his capacity for viewing the amusing side of trivial occurrences, which comes out in many of his accounts of humdrum scientific work. He says 'his father's mind was not scientific, and he did not try to generalise his knowledge under general laws; yet he formed a theory for almost everything which occurred.' It seems to an ordinary reader that the father's influence as well as his personal qualities of honesty and thoroughness and readiness of grasp had more to do with the formation of the son's character and tendencies than he himself allowed. Intellectually he does not think he gained much from him; but his moral influence for good to all his children he recognises with feeling.

Charles Darwin's elder brother Erasmus studied medicine at Edinburgh and London, and took his degree of Bachelor of Medicine at Cambridge, but he never made any pretence of practising as a doctor. However, it was to him that Charles Darwin went, while studying in Edinburgh for the profession, and he remained there two years. His remembrance of what he gained there was not satisfactory, and his brother remained with him there only one year.

Charles Darwin attended the lectures; but to a man of his peculiar mould lectures were distasteful, and he could see no advantage but many disadvantages in them. Nor was he led to dissect, and this he looks upon as one of the greatest evils in his life, for he never got over the feeling of disgust at the work, and he was conscious of his imperfection in manipulative skill. This and his incapacity to draw proved to his mind irremediable evils, and they cannot be too strongly urged upon students in our profession. Clinical ward-work, too, did not interest him, and this he is surprised at, for he had before this begun to attend cases and take notes carefully at Shrewsbury. His father declared he would be a successful physician, but he had no taste for surgery, and considering his sensitive temperament and horror of seeing painful sights, it is not to be wondered at. This was before 'the blessed days of chloroform.'

It was after his brother's departure that he was gradually drawn into the society of men more or less devoted to natural science, but from early boyhood his tastes had been in that direction, for he was as a boy attracted by a book called *The Wonders of the World*, and *White's Natural History* was to him, as to many others, a wonderful influence towards careful observation in all branches of natural history. It is noteworthy that at the time when a student at Edinburgh, his pleasure was found in attending the Natural History Society's meetings, though he carefully attended the Medical Society, as he felt it was a duty, and it is curious that he was led by 'the incredible dulness' of the lectures on geology and zoology to the determination never, as long as he lived, to read a book on geology, or in any way to study the science, and yet, later on, under the influence of Henslow and Sedgwick and Lyell, geology became, perhaps, his most favourite study.

In 1828 he went to Cambridge, and his intention was now to enter the Church, and this was never formally renounced, but died out when he was appointed naturalist to the *Beagle*. He does not do justice to the advantages of social intercourse with leading minds at the University, for he maintains that his 'time was wasted and worse than wasted there,' and yet it was there that he formed friendships which lasted his lifetime, and enjoyed the influence of such men as Henslow and Sedgwick. The taste for collecting and observing was very marked at this time, and he became an intimate friend of the teacher he most admired, and was called by some of the dons 'the man who walks with Henslow,' and there is no doubt that to this friendship he owed his happy selection of a life's work. The reading of *Humboldt's Personal Narrative* stirred up in him 'a burning zeal to add even the most humble contribution to the noble structure of natural science,' and when, through Professor Henslow, he was offered the appointment of naturalist to the *Beagle*, he was elated. It is curious that his being accepted hung upon a slender thread, as he found afterwards that Captain Fitzroy, being an ardent disciple of Lavater, felt grave doubts whether Darwin's nose was of the proper shape to guarantee him as possessing sufficient energy and determination of character.

This voyage laid the foundation of his reputation as a naturalist, and inculcated methods of observation and recording which made him the curiously methodical man he was, and enabled him to store and utilise a vast mountain of facts. But it perhaps did more than this; for he is inclined to attribute much of his illness in after life to the effects of a serious malarial fever he contracted in South America, and to the constant sickness he suffered when on a moderately rough sea. But it would rather seem that his liability to sea-sickness was an early evidence of the gastric susceptibility which became such a trial to him through his long life. And yet with this persistent sickness he worked away bravely both when at sea and afterwards when at his later work.

Five years were spent in this memorable voyage (1831 to 1836), and then he settled down to work at the material he had collected, and for rather more than two years he was engaged actively at this, but even during this time he was occasionally ill, 'and

so lost time.' He married in 1839, and three years afterwards left London, as he found his health unable to stand the wear and tear of the scientific societies there, and he settled at Down, near the Knockholt Beeches, in Kent, and there he remained until his death in 1822. His visits to various hydropathic health resorts became rather frequent after he found the benefit obtained from his first rest at Malvern, and he went almost annually for a time to one or other of these establishments.

But with all his illness it is wonderful and instructive too to find what he was able to accomplish by a methodical use of his time. A short outline of his day's occupation must be of interest. He rose early because he could not lie in bed, and took a short turn before breakfast, which he had alone about 7.45. He then went to work at once, considering the hour and a half between 8 and 9.30 one of his best working times. At 9.30 he came into the drawing-room, and would hear any family letters read aloud as he lay on the sofa. The reading aloud, which also included part of a novel, lasted till half-past ten, when he went back to work till twelve or a quarter past. By this time he considered his day's work over, and would often say in a satisfied voice, 'I've done a good day's work.' He then went out of doors, whether wet or fine, and went first to the greenhouse, where he looked at any germinating seeds or experimental plants, but he hardly ever did any serious observing at this time. Then he went for his constitutional, either round the 'sand walk'—a narrow strip of land with a gravel walk round it—or else outside his own grounds in the immediate neighbourhood, and in these quiet prowls he watched the life of animate nature. Luncheon came after the midday walk, and after lunch he read the newspapers as he lay on the sofa; and then came his time for writing letters as he sat on a huge horsehair chair by the fire; and then, about three o'clock, he lay down, smoking a cigarette, and listened to a novel or other non-scientific book read to him. At four he came down and went for a walk, but from 4.30 to 5.30 he worked, and then came into the drawing-room and was idle for half-an-hour, until it was time to go up for another rest, and a cigarette with novel reading. After dinner he played backgammon with great regularity, and then read some scientific book for a short time; then listened to music, and to the regular reading of some light literature. He became very tired in the evenings and slept badly at night, and, much as he enjoyed the society of others, he was so easily knocked up that he had to forego the pleasure of seeing many friends. Visitors came to luncheon and left in the afternoon, but a few intimate friends had the privilege of staying with him from Saturday till Monday, and Darwin's letters tell of the hearty pleasure he himself enjoyed when he was able to meet them.

In his work it is difficult to imagine a more methodical man. When he read a book he freely marked it for the passages bearing on any work he had in hand, and at the end made a list of the pages marked. Other notes and cuttings he put systematically into special portfolios, of which he kept about a dozen going, and in later years he wrote a rough copy of anything he intended for press, and this he had copied out fairly by his amanuensis.

We have dwelt rather fully on his method and his everyday life, for these bring him before us vividly, and the first of the three volumes will doubtless be read especially for the interest which such a picture gives to all literary scientific workers.

W. W. Wagstaffe.

NOTES ON BOOKS.

Article 423.

MAGAZINES AND PERIODICALS.

We have received the August number of the *Bulletin des Médecins et Naturalistes de Jassy*. This is the eighth monthly number of a medical journal published in Roumanian and French. It comprises the continuation of an article by M. Basile Conta on the 'Origin of Species,' and a paper on the 'Tranceines,' by Professor Istrati, together with the clinical history of a case of hysterical deaf-mutism in a man.

The *American Journal of the Medical Sciences* for March 1888 contains the first portion of an exhaustive paper by Dr. Samuel Gross on 'Carcinoma of the Breast, and its Treatment.' Dr. Byrom Bramwell contributes the notes of a case of aortic regurgitation, with presystolic thrill and murmur in the mitral area, and without mitral constriction. Drs. Shakespeare and De Schweinitz have collaborated in the elaboration of some notes on an unusual case of ciliary neuralgia with an erratic history. Three other papers on Localised Sweating in Thoracic Aneurism; Chronic Pyelitis treated by Kolpo-uretero-cystotomy; and a Case of Adeno-sarcoma of the Spinal Dura Mater, are from the pens of Drs. MacDonnell, Bozeman, and Hodenpyl. This (now) monthly publication keeps up the high standard of excellence of its international predecessor.

Alfred S. Gubb.

Article 424.

The Student's Handbook of the Practice of Medicine. By H. Aubrey Husband, M.B., C.M., &c. Fourth Edition. Edinburgh: E. & S. Livingstone. 1888.

This book belongs to a category of works which, when judiciously employed, are exceedingly useful to students, who resort to them extensively in spite of the frowns of their teachers. Some students experience great assistance from systematic tabulation of signs and symptoms, and all such will be able to revel in the plethora of tables which this book contains. Some of them are all that could be desired, but others are rather undigested synopses. The author has had a luminous idea in giving the French and German names and synonyms of each disease, but it has not been carried to its logical conclusion, some of the more puzzling ones having been omitted, and some of the renderings being open to question, such, for example, as 'kystes,' as the French equivalent of hydronephrosis. There is evidence of a want of care in the revision of the proofs, printers' errors being plentiful. Charity leads us to class the repeated mention of *nitrate* of amyl as one of them. In a work bearing the date of 1888 one would expect to find some mention of myxœdema, but any such expectation would result in disappointment. Although the volume does not sin in respect of size, a good deal of the matter might be further 'boiled down' with advantage. In a future edition the author would do well to amend and extend the

index, which is not what it might and should be. Apart from these minor defects, the book is one which fulfils its *raison d'être*, a fact which doubtless accounts for its having run to a fourth edition.

ARTICLE 425.

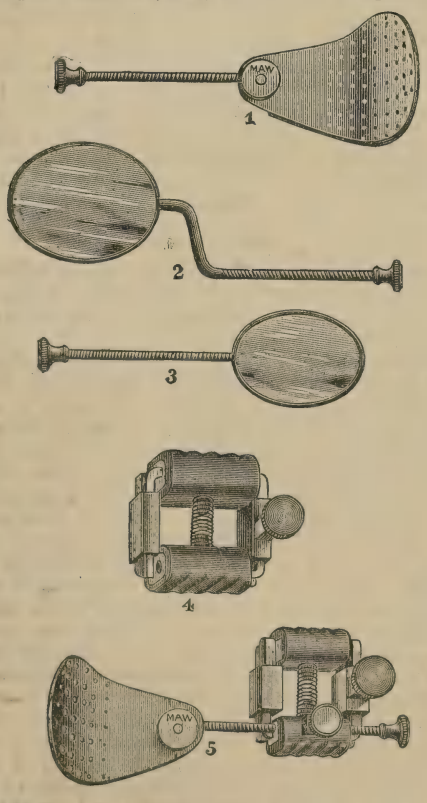
Aids to Obstetrics. By S. NALL, M.B., &c. Baillière, Tindall, & Cox.

THIS little book certainly fulfils its purpose as an aid to the overweighted student at examinations. Clear and concise, it gives in a small compass all the most important facts in obstetrics, leaving theoretical considerations and disputed points of treatment to the larger manuals. It is well written and arranged, and includes the more recent improvements in treatment. J. INGLIS PARSONS, M.D.

NEW INVENTIONS.

NEW GAG WITH THROAT GUARD.*

THE instrument exhibited in the engraving is the invention of Dr. John Ward Cousins, Senior Surgeon to the Royal Portsmouth Hospital, and to the South Hants Eye and Ear Infirmary; and consists of a gag in combination with a throat guard, mouth mirror, and tongue depressor. The gag is small and square-shaped (fig. 4), and it can be opened and



closed when placed in position in the mouth. The dental surfaces are made of steel, covered with thick pads of red rubber, and they are supported on either side by sliding bars and a metal collar. The bars are expanded by a central spring, and fixed by a rack and screw adjustment. The lower dental bar is tunnelled for the purpose of carrying the stem of the guard or mirror. By rotating the stem in the gag, the mouth-plate of the appendage is readily shifted, and then, by turning a binding screw, it is securely fixed. The gag with the throat guard attached to it is shown in fig. 5. The plate of the guard is spoon-shaped, and half of its surface is perforated with small openings, so as to permit the passage of air (fig. 1). It is also flexible, and can be easily bent to fit a shallow mouth. When placed obliquely on the fauces, its posterior edge rests against the anterior pillar, and it thus forms a complete protection to the throat. The guard divides the oral cavity into two parts, at the same time it acts as a very efficient tongue depressor.

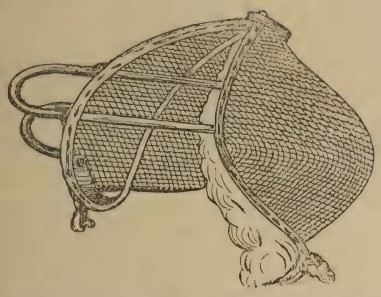
The gag is especially designed for the purposes of dental surgery, and for other minor operations on the mouth and gums. It can be used with safety during the administration of chloroform or nitrous oxide gas, and the guard is a great protection against the slipping of a tooth into the throat, an accident which may happen even to a careful and dexterous operator. It, moreover, enables the mouth to be readily cleansed of blood, and prevents it from entering the respiratory passages. The guard is generally very easily adjusted without causing any discomfort to the patient; but, whenever the fauces are extremely sensitive, it must be introduced with care and gentleness. In many cases the irritability is removed at once by the application of a solution of cocaine to the throat. The mirrors serve for tongue depressors, and they are adapted to illuminate the mouth in any direction. They are made in several sizes, and with both straight and angular stems (figs. 2 and 3). The buccal mirrors are not represented in the engraving; they consist of narrow reflecting plates, which are fixed at right angles on flexible stems. The right upper buccal mirror can be used for the outer surface of the left lower molars, and the left upper mirror can be fixed on the right side for a similar purpose. When in position the buccal plate gives a complete view of the outer surface of the teeth and gums, and acts also as a cheek distender, and compressor of Steno's duct. All the mirrors can be very conveniently used for dental operations, such as stopping and scaling, and they are intended as substitutes for the ordinary dental mirrors, which are often encumbrances in the hands of the operator. The gag is manufactured by Messrs. Maw, Son, & Thompson, of London.

DR. REYNAL O'CONNOR'S RESPIRATOR.

THIS respirator is invented for the purpose of filtering the air during respiration, and is constructed by M. Collin, of Paris. It is composed of two masks of very fine nickeled wire gauze, which can be opened and shut by means of a spring. The masks are of conical form, and cover the nose and mouth; the borders are covered with India-rubber, so as to protect the cheeks. The respirator is kept in its place by two elastic bands slipped over the ears, which are sufficiently light not to pull the ears forward. The air is filtered through a layer of medicated wadding, which can be changed as often as necessary. Dr. Reynal O'Connor has tried his respirator in the case of workmen in factories filled with all kinds of dust, and in two hours the wadding has become dirty, arresting the dust which would otherwise have been

* Exhibited in the Section of Surgery at the Annual Meeting of the British Medical Association, held in Dublin, August 1887.

inhaled by the workmen, and caused broncho-pulmonary diseases. He also found, in accordance with M. Pasteur's teachings, that the wadding was filled with microbes after a respirator had been worn for twenty-four hours by a patient who had not left the ward. The wadding also became fouled, though in a less degree, in a *post mortem* examination ward.



The inventor advises all miners, stonebreakers, metal-workers, and, in fact, all exposed to the inhalation of dust, to wear this respirator. Its chief use is for surgical operations, according to the recent experiments of Brown-Séquard on the danger of the poisonous air expired from the wounds.

NEW PREPARATIONS.

MESSRS. WARNER & CO.'S PHARMACEUTICAL PREPARATIONS.

We have received from Messrs. Newbery & Sons a list, &c., of the various special pharmaceutical preparations of Messrs. Warner & Co., of Philadelphia. Many of them are well known and much used in the States, and only require to be introduced into this country to be similarly appreciated. Their Bromo-Soda is an effervescing preparation of bromide of sodium. It is an elegant and palatable product, and is calculated to suit patients for whom the analogous potassium product is too depressing. Another recommendable formula is their effervescing hydrobromate of caffein and bromide of potassium, a teaspoonful of which contains twenty grains of the latter and one of caffein. In neuralgic headache, migraine, and the so-called 'nervous' conditions, including sea-sickness, it must find a wide field of application. Ingluvin is the modern substitute for pepsin, over which it is claimed to possess several advantages. It is particularly indicated in the vomiting of pregnancy, and in apeptic conditions generally. Messrs. Warner & Co. have prepared sugar-coated pills, from approved formulæ, the solubility of which they are enabled to guarantee, and their 'parvules' (from *parvum*) enable drugs to be administered in a convenient form and of easy dosage. All the principal drugs are supplied in this form, which is one towards which the public are decidedly favourably disposed. Among their preparations of coca erythroxylon, the *Liqueur Coca* (wine of coca) merits special mention. It corresponds to 16 per cent. of the drug.

SEATREE'S CUMBERLAND BROWN BREAD MEAL.

We have received samples of this meal, which is evidently very carefully prepared and deserving of commendation. The makers guarantee it to contain all the nutrient parts and properties of the finest British-grown and foreign cereals. The samples sent to us have been made into brown bread with excellent results.

Mr. T. Williams, F.C.S., the public analyst of Liverpool, who has made an exhaustive analysis of this meal, says that it is not only a model sample of strength and purity, but that, as a bone and muscle forming compound, its value is most marked, and he finishes his report by testifying that 'The Cumberland Brown Bread Meal contains the entire elements of nutrition in great abundance and easy digestive form.'

The makers of the Cumberland Brown Bread Meal are Messrs. Seatree & Sons, Penrith, Cumberland.

MISCELLANY.

The *Paris Médical* of Feb. 8, 1888, states that M. Franck has reported on the investigations of MM. Richet and Hanriot. According to these researches, the production of carbonic-acid gas is independent of the frequency of the respiratory movements, and in artificial sleep the decrease in the amount produced is enormous, and can only be attributed to a state of semi-suffocation.

The *Paris Médical* of March 3 describes a febrifuge much employed by the Indians, and by some medical men in Rio de Janeiro. It is Pareira wood, the bark of the *Geisso Spexnum Vellosi*, a lofty tree of the Brazilian mountains. This bark is sold in the form of closely packed bundles of thin, elastic, yellow leaves, in layers, of a pungent odour.

Rabic Virulence in Buried Corpses.—The virus of rabies is so active in buried corpses that when subsequent doubts arise as to the nature of the disease which proved mortal, the disinterment of and inoculation from the medulla oblongata determine it. M. Galtier has observed that the medulla oblongata of a dog dead from rabies, removed seventeen days after death, then buried for a further fifteen days, retained all its virulence. Inoculations from it resulted in rabies twelve days after.

The Commission of the Académie de Médecine on Telepathic Medicine.—M. Dujardin-Beaumetz's report of the commission appointed by the Academy to investigate the results of M. Luys' interesting communication on the therapeutic effects of telepathic medicine on patients in a state of hypnotism, dispels the therapeutic illusions founded on MM. Bourru and Buro's curious experiments. It was found that empty tubes had more effect on the patients than those filled with active substances; and absolutely contradictory phenomena were determined by these same substances, placed before the patients at a few days' interval. This investigation also proves the rashness of putting faith in any phenomena presented by the unconscious freaks of the whimsical and unreliable persons classed as hysterical patients.

Leprosy in Alicant.—Dr. Oswald Codina (*Union de las Ciencias*, Cartagena) states that leprosy has existed in this Spanish province for a century past, but that in recent times, and especially since 1850, it has extended alarmingly; so that, instead of being, as formerly, confined to a few districts, it has invaded the neighbouring province of Valencia, where it is now established. It appears that the disease once established in a district does not die out, but that case after case crops up. Although leprosy can be transmitted by inheritance, it appears probable that direct contagion is the most effective cause of its present extension. The establishment of lazar-houses is therefore essential, with other arrangements for isolation, and lepers should not be allowed to marry.

At a recent meeting of the Académie de Médecine, M. Hervieux communicated a letter from Dr. Longo,

residing at Bordiben-Arraridgi. The writer states that the practice of small-pox inoculations among the inhabitants of Kabylia is the cause of repeated small-pox epidemics in this country. Dr. Longo showed that this practice was not only dangerous to the inhabitants of Kabylia, but that it transmitted the disease to the Arab populations. He demands that inoculations with small-pox should be forbidden in that country, and that vaccination should be made compulsory. M. Hervieux remarked that the danger pointed out by Dr. Longo may be averted by the use of animal vaccine, to secure which it would be necessary to institute calf-lymph establishments in different parts of Algeria.

M. RÉNÉ SERRAUD has recently published a book, *Du Diagnostique Preuve de la Tuberculose* (J. B. Baillière), in which many of the subjects to be discussed at the Congress for the Scientific Study of Tuberculosis, to be held in Paris in July next, are studied. Amongst them is the question of the early diagnosis of phthisis. The writer states that patients who later on are attacked by pulmonary phthisis always present marked pharyngo-laryngeal symptoms, which considerably precede the pulmonary symptoms. They consist of anæmia of the pharyngeal mucous membrane, the lower vocal cords are unable to meet in consequence of atony of the constrictor muscles; localised congestion of the mucous membrane of the arytenoid and thyro-arytenoid muscles is present, resulting in a swollen condition of this region, which is very red. These three symptoms can exist separately, or simultaneously; one by itself only indicates the possibility of future pulmonary phthisis, the three in conjunction are incontestable proofs. M. Réné Serraud asserts that these symptoms are entirely wanting in laryngeal phthisis.

AT a recent meeting of the Académie des Sciences, M. Claude Martin described the results of his experiments on prolonged and continued anæsthesia produced by a mixture of proto-oxide of nitrogen and oxygen under pressure (Paul Bert's method). A dog remained during 72 hours in an atmosphere composed of 85 parts of proto-oxide of nitrogen and 15 parts of oxygen, at a pressure of 118; 25 litres of this atmosphere were supplied every hour; the carbonic acid produced was eliminated by milk of lime. This experience would show that during anæsthesia produced by a mixture of proto-oxide of nitrogen and oxygen, no toxic substance productive of serious symptoms is accumulated in the organism, even when this anæsthesia is prolonged for a considerable time. At the same meeting M. Béchamp stated that, in analysing the air expelled from the lungs by a healthy human being, he found a product in the fluid condensed by the lungs, a zymose which will render a farinaceous substance soluble. 100 gr. of this fluid contain 0·01 gr. of fixed organic matter, which is dried at a temperature of 60° Cent (140° Fahrenheit).

PHOSPHORESCENCE OF MARINE FISH. — *La Nature* gives the result of the researches made by Dr. Hermes to ascertain whether the phosphorescence of marine fish is produced by the same bacilli as those described by Dr. Fischer. Marine fish can be made phosphorescent when they are soaked in sea-water. Dr. Hermes made the experiment successfully with a fragment of *Gadus cellarias*, and the same bacillus was isolated and transferred to a sterile fish which, at the end of forty-eight hours, showed a bright green light. Sea-water also becomes phosphorescent by the same process. The great difference between the bacillus discovered by Dr. Hermes and that discovered by Dr. Fischer is that the latter is developed at a temperature of 20° to 22°, whilst the former increases at a lower temperature. It has been named *Bacillus phosphorescens*.

PARASITES IN FISH.—Amongst the more recent discoveries of scientific research is that of the presence of parasites in fish. Of these tiny, eel-like creatures, ten kinds are recognised in the fish of the Mediterranean Sea, the Atlantic and Indian Oceans. They are generally found in some cavity of the fish, the cavities of the respiratory organs of the star-fish being a very favourite abode. Sometimes they attach themselves to a part of the fish where existence is not so easy for them; for instance, they have been found in a pearl-oyster, buried in a curl of the shell. These parasites do not endanger the life of the fish on which they live, as they feed on the microscopic organisms, which are washed into the cavities of the fish by the sea-water—'eating their messmates,' according to Van Beneden.

THE WILLIAM F. JENKS MEMORIAL PRIZE.—The first triennial prize of 250 dollars, under the deed of trust of Mrs. W. F. Jenks, will be awarded to the author of the best essay on 'The Diagnosis and Treatment of Extra-Uterine Pregnancy.' The prize is open for competition to the whole world, but the essay must be the production of a single person, and must be written in the English language, or, if in a foreign language, must be accompanied by an English translation. All essays to be sent to the College of Physicians of Philadelphia, Pennsylvania, U.S.A., addressed to Ellwood Wilson, M.D., before Jan. 1, 1889. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. The committee will return unsuccessful essays if reclaimed within one year. If the successful essay be published, which the trustees have the power of doing, the distribution of it is to be entirely under the control of the trustees under the deed. If not published, it is to be the property of the College of Physicians of Philadelphia.

PRIZES of the value of 1,500 pesetas (£60) and 750 pesetas (£30) respectively, are offered by the Royal Academy of Medicine and Surgery of Barcelona under the will of the late Dr. Francisco Garé y Boix, for the two best essays on the following subject:—Pathogeny of Gonorrhœa (with illustrative preparations); its Clinical Features, with Special Reference to the Chronic Forms of the Disease, and to Recurrence; the various Morbid Processes accompanying and following it; its Prophylaxis and Treatment. In addition to the money prize, the title of Corresponding Fellow of the Academy will be conferred on each of the successful candidates. Essays, which must be written very legibly either in Spanish, French, or Italian, must be sent to the Perpetual Secretary of the Academy, Dr. Luis Suñé y Molist, Baños Nuevos No. 9, Barcelona, before midday of June 30, 1889. No essay must bear the name or address of the author, which must be sent separately in a sealed envelope, bearing a motto corresponding to one on the essay. The successful essays are to be the property of the authors, who will be at liberty to publish them, but without any correction, addition, or suppression.

PATNA is one of the two places in British India where opium is manufactured by Government. The cultivation of the poppy is confined to the large central Gangetic tract, about 600 miles in length and 250 miles in breadth; it extends on the north to the borders of Nepaul, on the east to Bhagalpur, on the south to Hazaribagh, and on the west to Bareli district, in the North-Western Provinces. This tract is divided into the two agencies of Behar and Benares, the former being under the charge of an agent stationed at Bankipur, and the latter of an agent at Ghazipur; both agencies are under the control of the Board of Revenue in Calcutta. . . . The poppy cultivated is exclusively the white variety, and the crop requires great attention. The ground having been carefully prepared, the seed is sown broadcast in November, and by February the plant is generally in full flower, having reached a height of from 3 ft. to 4 ft. Towards the middle of that month the petals are stripped off, and four or five days after their removal, when the capsules have attained their utmost development, the collection of the juice commences—a process which extends from about February 20 to the 25th of March. The amount of produce from various lands differs considerably. Under very favourable circumstances of soil and season the out-turn per acre may be as high as 41lb. of standard opium (*i.e.* containing 70 per cent. of pure opium and 30 per cent. of water), paid for at the rate of 5*s.* per lb.; but the average is from 10lb. to 16lb. per acre.

The London Medical Recorder.

ARTICLE 426.

PEARSON ON THE COACHFORD POISONING CASE.

AT a recent meeting of the Section of State Medicine of the Academy of Medicine in Ireland, Dr. C. Yelverton Pearson read a paper on the medico-legal aspects of the now celebrated case in which Surgeon-Major Cross was tried for and convicted of the murder of his wife, reported in the *Dublin Journal of Medical Science*, March 1888. Dr. Pearson was the chief medical witness for the Crown, and, therefore, had every opportunity for becoming fully acquainted with all the facts. Suspicion having been aroused among the friends of the deceased owing to the precipitate second marriage of her husband, the body of Mrs. Cross was exhumed and examined seven weeks after her death. The body was well nourished, and *post mortem* decomposition very little advanced, the thoracic viscera were healthy, there was a little hypostatic congestion of the lungs, the right side of the heart was moderately full of blood, the left side nearly empty, the larynx and trachea showed some commencing decomposition, the rest of the thoracic viscera were free from putrefactive changes. The liver had some small deposits of phosphate of calcium on its surface, but the abdominal viscera were otherwise very well preserved, the stomach and intestines especially presenting a fresh appearance, and the latter were moderately distended with gas. The alimentary canal was examined with the following results. 'There was nothing peculiar in the mouth or pharynx. The lower end of the œsophagus contained a number of white particles, the largest being the size of a small pin's head; towards its termination in the stomach, the mucous membrane presented a number of oval abrasions about $\frac{1}{20}$ to $\frac{1}{12}$ of an inch in length; the membrane was also congested throughout. The stomach contained a small amount of slimy mucus; also a number of hard white particles, some of which were free, while others were partially imbedded in the mucous membrane; the mucous membrane itself seemed perfectly healthy. The small intestines were coated on their interior in many places with patches of slimy mucus, of a bright yellow colour; a few white particles, similar in appearance to those found in the stomach, were present at the upper end of the duodenum. The coats of the greater portion of the duodenum and adjacent few inches of the jejunum showed extensive congested patches of a bright red colour. The mucous membrane of these portions of the gut was swollen and injected; the remaining portion of the small intestine was perfectly healthy. The large intestines were healthy, and contained only a small quantity of slimy mucus; no fæces were present in any portion of the bowel.' Commenting on the *post mortem* examination, Dr. Pearson showed that the evidence pointed to an irritant poison having been used, and having caused both vomiting and purging, and the good state of preservation of the internal organs pointed to arsenic as the poison used. This was subsequently proved to be the case by the analysis. Crystals of arsenious acid were obtained from the contents of the stomach, in the scrapings from the mucous lining of the stomach, and in the walls of the stomach and duodenum. A trace of arsenic was found in the spleen, more in the kidney, and a considerable quantity in the liver. The presumption from the examination and analysis would be that the poison was administered in the solid form and in divided doses; the absence of inflammation of the stomach could hardly be accounted for on any other hypothesis. The symptoms exhibited by the deceased, as gathered from the evidence of some who were in the house, fitted in very well with this hypothesis. The first onset was three weeks before her death, when she had spasm at the heart, with cramps, vomiting, and diarrhœa. She had similar attacks at intervals during the next few days, but between the attacks was able to be about with the rest of the family. For the last week of her life she was confined to bed with the same symptoms but in more marked degree. She was only seen by one medical man about ten days before her death, who considered that she was suffering from bilious fever. The presence of strychnia in the body was also proved, but the prosecution did not make an attempt to attach any importance to this discovery, though it was highly probable that her death may have been due in some measure to strychnia rather than arsenic, for one of the servants testified that she had seen deceased have three fits each lasting about ten minutes, in which she got stiff, clashed her teeth together, and used to complain of her heart, and on the night of her death the deceased was heard screaming for four or five minutes as if in pain. As usual, when the cause of death is so clear, the defence was singularly weak, and, indeed, it could hardly have been otherwise with such a mass of evidence against the prisoner, who had made two false statements—namely, that his wife died from typhoid fever, and that she was the subject of heart-disease, both of which were disproved by the *post mortem* examination. It is difficult to see how more evidence could have been obtained to connect the prisoner with the crime unless it had been that of someone who actually saw him place the poison in his wife's food or medicine.

ARTICLE 427.

ROBERTSON ON SUBSTITUTION IN DISEASE.

IN the *Edin. Med. Jour.*, April 1888, p. 895, Dr. Alex. Robertson contributes an instructive article on the subject of substitution in disease. It is manifested as a physiological condition in health; thus the skin in summer exhales at least much more moisture than in the cold of winter, and the quantity of urine is proportionately diminished, while in winter the reverse holds true. There are many forms of disease in which this substitutionary action is evident. Vicarious menstruation is a good example. In chronic Bright's disease other emunctory organs often undertake to some extent the special renal function of excreting the nitrogenous waste of the system; the author has met with cases in which daily vomiting gave much relief. Another good illustration is met with in cases of so-called irregular gout, particularly when it is retrocedent from the joints and affects one or other of the internal organs, such as the stomach. Rheumatism is some-

times seen to interchange with mental disease. In certain constitutions the healing of old ulcers is attended with great risk. It is, however, in diseases of the nervous system, inclusive of the brain, that we see the clearest and most striking illustrations of this principle. It is almost the rule in many of the hereditary neuroses to find that the particular form of disease which exists in the son or daughter is not that which was present in the parent from whom it has been derived, but one different in its character, though allied in nature. It is common for an epileptic parent to have a child with some defect in his nervous system other than epilepsy. It may be mania, or the insane temperament, or mere imbecility ; or, conversely, a father subject to maniacal attacks begets a child who becomes epileptic. It is, however, admitted that epilepsy may be inherited as such from the parents. In fact, it must be fully recognised that there are numerous cases of mental disease, in which the reproduction in descent is very similar, if not quite identical, but it still remains true that metamorphosis in heredity is very common. In the production of this transmission the influence of the other parent is no doubt an important factor, and sometimes it seems sufficient to overcome the morbid disposition altogether. The author then passes on to consider this principle of mutation in the individual, confining his attention to the evidence of it in disorders of the nervous system. A case is cited of a lady, aged 50, who had been a victim to asthma from girlhood, but when the climacteric period was reached she suffered from an attack of acute mania for six weeks. During this time the breathing was easy and free from spasm. As the mental disease improved, the asthma returned, and when she had fully recovered soundness of mind the paroxysmal distress of breathing was present in all its previous intensity. The interchangeability of the different forms of neuralgia is well known. In a case of gastralgia, which had been troublesome for some years, the patient stated that during the earlier part of her life she was a martyr to tic douloureux, but this had ceased to trouble her since she had suffered from gastralgia. Neuralgia and insanity may alternate, or be transmuted the one into the other. About seven years since, a well-marked case of hystero-epilepsy with hemianæsthesia was under the care of Dr. M'Call Anderson ; the patient was a girl aged 18, and in April 1879 she was discharged as nearly well of the anæsthesia. In October 1879 she was admitted under the author's care, suffering from acute mania, and was not dismissed as well until March 1881. There was no recurrence of the anæsthesia, but during the next five years she was five times in an asylum for periods ranging from three to six months. The peculiarity of this case was the fact that the anæsthesia was on the left side, and when in the asylum, on account of mania, she had frequent convulsive seizures affecting the right side of the body. The substitutionary character of the disease was strikingly demonstrated by the transference of the sensory defect from one side of the body to the other, the disorder having, so to speak, jumped from the sensorium in one hemisphere of the brain to the sensorium in the other hemisphere. Our knowledge of the intimate mutual relations of the different parts of the nervous system is not yet sufficiently advanced to enable much speculation on the pathology of this substitutionary action. In gout, a determination of the *materies morbi* to the joints, and the deposition of the urate of soda in and around them, seems satisfactorily to account for the disappearance of discomfort from the internal organs. When the phenomena to be accounted for are such as epilepsy or apoplexy following the healing of old ulcers (instances of this are not at all rare), we may suppose that morbid action has somehow been diverted from the region of the sore, which acts as a kind of safety-valve to the brain. The alternations of asthma or neuralgia and insanity are not explicable by our present knowledge. The same may be said as to the mutations of heredity. The principle of substitution is suggestive in relation to treatment. It underlies the different modes of counter-irritation—such as blisters, setons, issues, and the actual cautery. By their means an artificial disease is established, which is often successful in withdrawing abnormal vital force or action from some internal organ, where it is destroying tissue, to the surface of the body.—[With reference to the statement that 'healing of old ulcers is attended with great risk,' a reference to Sect. 172 : 1 of the *Medical Digest and Appendix* will show that there is a difference of opinion upon this subject.—*Rep.*]

RICHARD NEALE, M.D.

ARTICLE 428.

MÜLLER, IVERSEN, TUCHMANN, AND FENWICK ON THE SURGERY OF THE URETER.

THE removal of a kidney is always a serious matter, for the necessary steps of the operation are severe. Deep incisions have to be made, and the finger must be used to explore recesses where delicate structures lie. When one kidney is removed the other may prove to be diseased, death in that case being certain. Hence any method by which the desired unilateral character or the undesired bilateral nature of a renal affection, suited more or less for surgical treatment, can be ascertained, deserves due consideration. The temporary stoppage by compression of one ureter and the examination of the urine which flows into the bladder whilst that ureter is compressed, is, at present, perhaps the most feasible proceeding by which the immunity or implication of one kidney can be ascertained in cases where renal tumour, calculous pyelitis, &c., is diagnosed. The catheterisation of the ureter and its stoppage for the arrest of otherwise uncontrollable hæmaturia are kindred topics.

Dr. Axel Iversen, of Copenhagen, took a yet bolder step last autumn.* He laid open the bladder and looked at the urine as it issued from the two ureters. A man, aged 38, had symptoms of calculous pyelitis, but the objective and subjective symptoms did not distinctly indicate whether one or both kidneys were implicated. He laid open the bladder above the pubes and illuminated the exposed cavity by aid of the electric light. From the right ureter an almost clear fluid was withdrawn ; it issued intermittently from a fine catheter which was introduced into the ureteric orifice. On catheterisation of the left ureter, on the other hand, pus escaped freely and with such rapidity as to suggest that it was subjected to much pressure from above. The urine from the right kidney was carefully

* 'Beitrag zur Katheterisation der Ureteren bei dem Manne.' (*Centralblatt für Chirurgie*, No. 16, 1888.)

examined. It contained abundant epithelial cells from the upper and middle portions of the urinary tract and a considerable quantity of hyaline and finely granular casts. Hence it was evident that the removal of the left kidney would be fraught with peril to the patient, and since pus flowed so freely from the left ureter there appeared, in Dr. Iversen's opinion, to be no necessity to make a lumbar incision and to pass a drainage-tube into the pelvis of the left kidney. The patient recovered from the suprapubic operation. Dr. Iversen did not believe in the catheterisation or compression of the ureters; even in the female, catheterisation with the aid of the cystoscope demands great dexterity and practice, and though the cystoscope allows the surgeon to see the ureteric orifices, it lies, as long as it is adjusted for that purpose, in the way of a ureteric catheter.

Dr. P. Müller* has contrived a ureter-compressor for introduction into the rectum, on the principle of Mr. Davy's lever. He had tested, in the *post mortem* room, the relations of the ureter to the pelvic walls. He stated that the ureter may be compressed by introducing the finger into the rectum, and slipping it along the side of the pelvis till it reaches a point one inch and a half above the spine of the ischium, in the direction of the pelvic brim. At that point the ureter may be compressed. Dr. Müller's compressor is an angular instrument with a short arm, which can be made fast by a bandage to the thigh, and bears a screw which allows the longer arm to be adjusted at a convenient angle. At the extremity of the longer arm is a bag, bearing a tube, by which it may be filled with mercury, after introduction in the flaccid state. The patient is placed on one side, and the long arm of the instrument bearing the bag is then introduced for about five inches up the rectum. Lastly, a funnel fitted with a long glass tube is connected with the tube attached to the bag, and mercury is poured in till the bag is filled. Nearly four pounds of mercury appeared to be necessary. It seems that Dr. Müller has only once employed this ureter-compressor on the living subject.

A description of Dr. Tuchmann's ureter-forceps will be found in our review of his *Diagnose der Blasen- und Nierenkrankheiten mittelst der Harnleiterpincette* in the London Medical Recorder, March 20, 1888. It resembles a lithotrite, and one blade is hollow, so that the ureter in its course through the vesical walls may be grasped for a few minutes whilst urine escapes from the other ureter, and runs out of the hollow blade of the instrument. The urine thus collected is examined, and the opposite ureter is then compressed, and the urine which comes away during the period of its compression is tested. Dr. Tuchmann uses his ureter-forceps on male as well as on female patients.

Mr. Hurry Fenwick has advocated and practised a singular surgical proceeding of much ingenuity, to which he gives the term of 'clottage of the ureters'—'a definite and determinate endeavour on the part of the surgeon to *cork* a ureter with a clot of blood.'† A man, aged 53, came under Mr. Fenwick's treatment with symptoms of malignant disease of the right kidney due to an injury. There had been violent and persistent hæmaturia for fourteen months. A ureter aspirator was introduced into the right ureteric orifice, and suction applied. The instrument was soon filled with clot. A little blood was passed a few hours after; but from that date until the patient's death, six months later, there was no recurrence of the hæmaturia.

The ureter aspirator, mentioned above, is another contrivance of Mr. Fenwick's.* It was designed for the direct catherisation of the ureter, for diagnostic purposes. The instrument is a catheter, to the handle of which an elastic ball is fitted after the extremity has been passed into the orifice of the ureter. The ball is applied in a flaccid state, pressed by the right hand; after it has been affixed to the catheter it is allowed to distend gradually. In this manner urine is sucked up into the catheter, and preserved for examination. The ureter aspirator is designed for male patients.

All the above proceedings are far too difficult and uncertain for general employment in private and hospital practice, and it is clear that the experts here mentioned differed greatly in their opinions as to the best means of diagnosing the extent of renal disease by surgical proceedings involving the ureters. There are many sources of fallacy. Growths in the region of the ureters greatly increase the difficulty of introducing an instrument, and the ureters may be displaced from their normal relations by disease. Mr. Fenwick has exhibited at the Pathological Society a specimen of atresia of the vesical orifice of the left ureter. Displacement or atresia would of course render incorrect any opinion derived from Tuchmann's or Müller's systems of temporary compression. Dr. Iversen's practice is heroic, and open to the objection (amongst others more obvious) that should both kidneys prove badly diseased, as in his case, the patient might speedily die after the exploratory suprapubic cystotomy. His objection to the cystoscope does not apply to every case where the ureteric orifices require inspection.

Alban Doran.

Article 429.

DUKE ON THE ADVANTAGES OF ABDOMINAL SUPPORT DURING PREGNANCY.

Every obstetrician of fair experience must have met with cases, however well cared for during and after confinement, who still suffered from 'pendulous abdomen' or want of tone in the abdominal muscles, the said want of tone being often conducive to ventral hernia, constipation of the bowels, and also displacement of the uterus.

As a rule, patients during the whole term of pregnancy wear their corsets, and, however they may loosen or adjust the same, still the downward pressure of the corset acts in a contrary direction to the uterus, which, from the earliest months, raises itself upwards towards the diaphragm, and continues to move in the upward direction till the full term of pregnancy is completed.

Knowing this to be the case, I always advise patients in the pregnant condition to leave off their corsets (from about the fourth month onward should I see them at that time), and having supplied the want of a corset by suitable bodice, to wear a supporting belt with elastic sides, so as to exercise a comfortable pressure from below on the muscles, and fitted with tapes or straps to relax the pressure as the abdomen enlarges.

* 'Ueber zeitweiligen künstlichen Harnleiterverschluss.' (*Deutsche medicinische Wochenschrift*, 1887, No. 31.)

† *Proceedings of the Medical Society*, vol. x., 1887, p. 276.

* 'Suction of the Male Ureters.' *Lancet*, vol. ii., 1886, p. 529.

In every case in which I have recommended this to be done, and when my directions were followed, the patient not only expressed herself as feeling far more comfortable, but I have remarked that the ensuing labour was of much shorter duration, owing, I believe, to the support afforded in time to the abdominal muscles, and which by husbanding their tone and strength, enabled them to assist the uterus in its efforts of expulsion in a marked degree.

The belt need not be worn at night unless the patient wishes it, but should be put on before rising in the morning. When engaged to attend primipara I direct the abdomen to be well rubbed over with fresh lard at bedtime. When this is regularly done there is little or no trace of the lineæ albicantes to be discovered after the patient recovers from the lying-in, and the abdomen quickly resumes its natural shape and appearance, which the patient generally is the first to remark.

If patients were only aware of the value of this treatment in 'preserving their figure,' I have no doubt that it would be generally adopted.

ALEXANDER DUKE, F.K.Q.C.P.I.

ARTICLE 430.

HUNTER ON AFFECTIONS OF THE EAR.

IN the *Edinburgh Med. Jour.*, April 1888, p. 904, Dr. George Hunter contributes some remarks on the subject of treating affections of the ear by general practitioners. A few years ago the majority of practitioners had been taught very little about the ear, but now most men know something and can diagnose when it is necessary to consult a specialist. The examination of every case of deficient hearing should always be tested systematically:—1. By *conversation*; 2, by *watch*; and 3, by *tuning-fork*. By the use of the tuning-fork we obtain most important information, and in most cases are able to distinguish between diseases affecting the sound-conducting and the nervous or sound-perceiving apparatus. Vibrations ought to be heard more distinctly in front of the meatus than over the vertex or mastoid, *i.e.* air conduction ought to be in excess of bone conduction. Should the converse be the case, some obstruction to the passage of sound through the meatus, membrana tympani, or tympanic cavity, exists, but the functions of the acoustic nerve are unimpaired. If, however, bone conduction be impaired or abolished in the deaf ear, we may assume that the auditory nerve is not so sensitive to the impressions of sound as it ought to be, and that either there exists some abnormal pressure upon the fluid of the labyrinth, or that the nerve itself is diseased. The most common ailment met with is the accumulation of cerumen; this is, as a rule, easily removed by syringing, but if there be any difficulty, a little bicarbonate of soda solution will soon soften down the mass and allow it to be washed away by the syringe.

Another affection often met with in general practice is chronic otorrhœa. The treatment of these cases is, as a rule, by means of some antiseptic or astringent lotion; often this is not sufficient, but must be combined with Valsalva's or Politzer's inflation, which both cleanses the tympanic cavity and prevents adhesions between the promontory and membrane. The author thinks he has obtained better results from using warm boric instillations and solutions of carbolic acid and zinc, than by what is termed the 'dry method' of treatment. When granulations or polypi form, they must be removed by forceps if needed, but sometimes they can be destroyed by absolute alcohol, or the application of chromic acid, or even by a fine galvano-caustic point. A still further consequence of chronic otorrhœa is mastoid disease, and in these cases the author strongly advises the employment of operative means before the cerebral symptoms become serious. Special attention is drawn to the form of aural disease, due to mucous catarrh, of the middle ear. The great majority of these cases are the result of morbid conditions of the naso-pharynx. In most cases of chronic enlargement of the tonsils, and in the adenoid growths of the vault of the naso-pharynx occurring in young people, mucous catarrh of the middle ear may be suspected; whilst nasal polypi, hypertrophic rhinitis, and granular pharyngitis, generally lead to it in the adult. If the membrana tympani be found much drawn inwards, and if tinnitus be also complained of, treatment should be directed towards restoring the permeability of the Eustachian tubes, and permitting ventilation of the tympanum by means of the air douche; this is accomplished by Politzer's inflation through the nostrils only, or by means of the Eustachian catheter. In the deafness of children and young people, Politzer's method of inflation is sufficient, without using the catheter. Instead of making the patient swallow water, it is much easier to make them repeat 'hook' at the moment the bag is compressed. If this fails, then catheterism of the Eustachian tubes must be adopted. In those advanced cases of non-suppurative catarrh where collections of fluid, proliferation of epithelium, or bands of adhesions have taken place, with stiffening of the articulation of the ossicles and of the connection between the stapedius and fenestra ovalis, the case is one that ought to have the opinion and treatment of an experienced aural surgeon.

RICHARD NEALE, M.D.

ARTICLE 431.

SCHREIBER ON THE LOCAL TREATMENT OF DISEASES OF THE RESPIRATORY APPARATUS.

THIS treatise by Dr. Julius Schreiber, of Könisberg, contributed originally to the *Zeitschr. für klin. Med.*, has been published in a separate form (*Deutsche med. Zeitung*). After proving that the inhalation treatment has no local effect, and is not rational, Schreiber goes on to show how this treatment may be transformed into a local one. The chief results of his 'combined methods of treatment' are thus given in the *Deutsche med. Zeitung*:—

1. *The combined inhalation method.*—Here one-sided compression of the thorax in conjunction with simultaneous inhalation of medicated vapour is directed more immediately against the seat of the disease, and thus made to have a local effect. This plan will be applicable to cases in which hitherto simple inhalation of pulverised or volatile substances has been resorted to—*e.g.* in catarrh of the larger and smaller bronchi of the upper or lower lobe; further, in bronchiectasis, putrid bronchitis, chronic tubercular processes, in abscesses or gangrene.

2. *One-sided compression of the thorax.*—This takes the place of inhalation of compressed air, and is to be resorted to in cases of atelectasis, defective development of the lung after pleuritic exudations of either a serous or purulent nature, and after

severe acute pneumonia; further, in cases of adhesions of the pleura and pneumothorax. The weakness of the respiratory muscles on the diseased side is remedied by the compression of the healthy side, combined eventually with inhalation of compressed air. In this way a normal condition of the thorax and lung is more or less restored. In mild cases simple compression suffices, while in more severe cases it will be necessary to treat with compression of the healthy side and inhalation of compressed air once or twice a day, and twice, thrice, or four times a day with compression alone for fifteen, thirty, or forty-five minutes. It is advantageous if walking exercise in the open air can be taken during this treatment. Schreiber suggests that the patient should wear, night and day, over the shoulder of the healthy side, a padded cap of leather fastened across the back and chest by a strap.

3. *Bilateral or Circular Compression of the Thorax.*—This takes the place of expiration into rarefied air, and is a suitable treatment of pulmonic emphysema without complications. This disease demands frequent ventilation of the lung, and this is most effectively provided by the bilateral compression of the thorax, which in some cases may be done twice or thrice a day for ten to fifteen minutes, combined ultimately with simultaneous expiration into rarefied air as a subsidiary means. To continue the after effect bilateral compression must be done twice or thrice a day for fifteen to thirty minutes, but at a lower degree of compression, or, what answers the same purpose in a more convenient way, an elastic corset may be worn for several hours a day.

By these methods expiratory insufficiency may be remedied, but it remains an open question whether the anatomical basis of the emphysema can thus be affected. In all cases the temporary correction in this way of the expiratory insufficiency at the same time checks most effectually the progress of the disease, and coincides with the strengthening of the power of expiration produced by the elastic corset. Schreiber compares the object of the use of the corset in such cases with that of the concave glass in myopia, in as far as it enables the patient in the simplest way to do more lung work—*e.g.* in walking or mounting stairs. As the concave glass has no effect on the consequences of excessive exertion of the eye, and is of no avail in cases of complicated catarrh of the conjunctiva, neither will the corset prevent or cure the effects of excessive exertion of the body or complicated bronchial catarrh. Further, it will be useless, or even injurious, if not properly adjusted, just as a concave glass if too weak is useless, and if too strong is injurious.

Great care is necessary in determining the indications for the adaptation of this method, and particular attention must be given to the normal course of the individual phases of respiration, and further, to their disturbances, and the insufficiency of inspiration and expiration. For the elastic corset must not be applied in every form of dyspnœa, nor even in all affections of the respiratory apparatus accompanied by insufficiency of expiration (purely nervous bronchial asthma, indistinct bronchial asthmatic conditions of aged emphysematic patients). Nor is it applicable even in all cases of emphysema, especially in such as are ultimately complicated with insufficiency of the inspirators as well, or with interstitial chronic pneumonia. A little practice will soon enable one to determine the necessary degree of pressure both for unilateral and bilateral compression. It is best to begin with the lowest degree of pressure. The great merit of this combined treatment lies in the fact that it admits of a direct local influence on the diseased lung.

JOHN ELLIOTT.

ARTICLE 432.

ON THE IMMUNITY OF THE INSANE FROM PHYSICAL PAIN IN ORGANIC DISEASES, AND IN INJURIES WHICH IN THE SANE ARE ACCOMPANIED BY MUCH BODILY SUFFERING.

IN a paper in the *Australian Medical Journal*, February 1888, Dr. James Edward Neild describes a case at length in which a man, aged 36, swallowed a German silver fork in February 1887, from the effects of which feat he died in September 1887, or seven months later.

History: Admitted March 9, 1886, aged, then, 35. Melancholia. On the day of his admission the blade of a pocket-knife was removed from the umbilicus, which had apparently entered the cavity of the abdomen. Had also inserted a darning needle through the same place, and had previously swallowed a pound of paint. Beyond some pain referable to the abdomen, caused by change of position, he never suffered in any way. He regained his health, and went out on two months' probation to his friends, but returned two months later.

Sept. 20.—Stated to Dr. O'Brien, superintendent of the Hospital for the Insane at Kew, that he had swallowed a fork in the month of February last. On examination there was marked dulness over a space, limited by the cardiac area, both anteriorly and posteriorly; the hepatic dulness was increased towards the left side, there was pain referable to the right shoulder, and evident distress in examining the abdomen. He died on the 22nd. The *post mortem* examination was made on the 23rd. The pericardium contained pus, and was lined by adhesions. There was a nearly closed opening connecting the cavity of the pericardium with that of the œsophagus, and for about four inches adjoining this opening the lining membrane of the tube was roughened and sloughy. In the abdomen there were evidences of recent peritonitis, with some adhesions.

A much oxydised sewing needle, 2½ inches long, was inserted in the upper part of the great omentum. On opening the stomach the handle of a German silver dinner fork was observed; the prong end was through the pylorus, and it was firmly stuck, to the extent of 2 inches, into the anterior portion of the lesser lobe of the liver. It was so firmly fixed that it required to be cut out. The liver generally was much congested. All the rest of the organs were normal. The interesting part of the case was the tolerance by the patient of a large foreign body in this locality without any symptoms showing themselves to indicate its presence.

Dr. Neild also exhibited 24 calculi, which he took some years ago from the bladder of a lunatic, aged 61, who had never exhibited during life a symptom of vesical irritation. Each calculus was about the size of a hazel-nut. Examples of the insensibility of the insane to pain and inconvenience were also mentioned in cases of phthisis, peritonitis, fractures, burns, mutilation, indifference to heat and cold, &c. The paper was well received and fully discussed.

Amongst about 200 *post mortems* made by the reporter, cancer of the pylorus, peritonitis, innu-

merable stones in the gall bladder, distended colon, the presence of buttons, pieces of towelling and clothing in the intestines have been occasionally found. During life he has observed indifference to pain in one patient when the soles of the feet had been burnt raw by exposing them voluntarily to the fire; in another the same apathy when she bit off the joints of her fingers one by one, and in a third a persistence in walking with a recently fractured tibia and fibula of the same leg.

HENRY SUTHERLAND, M.D.

PATHOLOGY.

RECENT PAPERS.

433. MÉNÉTRIER, DR.—On Multiple Adenomata of the Stomach. 'Des polyadénomes gastriques et de leurs rapports avec le cancer de l'estomac.' (*Arch. de Phys. Norm. et Path.*, 1888, Nos. 1 and 2.)

434. NEUMANN.—On Pigmentation. 'Beiträge zur kenntniss der Pathologischen Pigmente.' (Virchow's *Archiv*, Band cxi., Heft 1, p. 25.)

435. ARNOLD, DR. JULIUS.—On Pilose Tumours of the Mouth Cavity. 'Ueber behaarten Polypen der Rachen-Mundhöhle und deren Stellung zu den Teratomen.' (Virchow's *Archiv*, Band cxi., Heft 1, p. 176.)

436. MIURA.—The Pathology of Kak-ke. 'Beiträge sur Pathologischen Anatomie der Kak-ke.' Von Dr. Miura. (Virchow's *Archiv*, Band cxi., Heft 2, p. 361.)

437. LUBARSCH, DR. OTTO.—On the Co-existence of Carcinoma and Tubercle. 'Ueber den primären Krebs des Ileum nebst Bemerkungen über das gleichzeitige Vorkommen von Krebs und Tuberculose.' (Virchow's *Archiv*, Band cxi., Heft 2, S. 280.)

438. KRYSINSKI, DR. S.—On a Rare Anomaly of the Hymen. 'Eine seltene Hymenanomalie.' (Virchow's *Archiv*, Band cxi., Heft ii., S. 386.)

439. SUTTON, J. B.—On Congenital Fissures of the Mouth.—On some Cases of Congenital Fissures of the Mouth. (Reprinted from *Transactions*, *Odontological Society of Great Britain*, 1887.)

440. MACMUNN, C. A.—On Addison's Disease. On Addison's Disease and on the Function of the Suprarenal Bodies. (*Brit. Med. Jour.*, Feb. 4, 1888, p. 233.)

441. SUTTON, J. B.—On a Parasitic Fœtus. (*Brit. Med. Jour.*, Feb. 11, 1888, p. 312.)

442. SENATOR, PROFESSOR H.—On Transudation. 'Ueber Transsudation und über den Einfluss des Blutdrucks auf die Beschaffenheit der Transsudate.' (Virchow's *Archiv*, Band cxi., Heft 2, S. 219.)

443. SPRONCK, DR. C. M. M.—On Lesions of the Spinal Cord due to Anæmia. 'Contribution à l'étude expérimentale des lésions de la moelle épinière, déterminées par l'anémie passagère de cet organe.' (*Arch. de Phys. Norm. et Path.*, 1888, No. 1, p. 1.)

444. KRÖNIG.—On Phosphoric Hepatitis. 'Die Genese der Chronischen interstitiellen Phosphor-Hepatitis.' (Virchow's *Archiv*, Band cx., Heft 3, p. 502.)

445. HAYEM.—On Death by Hæmorrhage. 'De la mort par hémorrhagie.' (*Arch. de Phys. Norm. et Path.*, 1888, No. 1, p. 103.)

446. SÄNGER AND FÜRST.—Tumours of the Abdominal Wall. 'Ueber desmoide Geschwülste der Bauchwand.' (*Archiv für Gyn.*, Band xxiv.) 'Zur Casuistik der Bauchdecken-Tumoren.' (*Zeitschrift für Geburtsh. und Gyn.*, Band xiv., Heft 2, 1888.)

447. MAAS, DR.—On an Unusual Case of Abdominal Tumour. (*Centralbl. für Gynäk.*, No. 16, 1888.)

448. IMPACCIANTE, DR. GIULIO.—Tumour of the Mediastinum implicating the Heart. (*Lo Sperimentale*, January 1888, Tom. lxi.)

449. BARD, DR.—On Leukocythæmia considered as a Cancer of the Blood. (*Lyon Méd.*, Feb. 12, 1888.)

450. VINAY, DR.—On the Etiology of Ulcerative Endocarditis. (*Lyon Médical*, March 25, 1888.)

451. HANDFORD.—A Case of Aneurysm of the Aorta communicating with the Pulmonary Artery. (*Edinburgh Med. Jour.*, February 1888, p. 695.)

452. TROISIER.—Supra-clavicular Adenopathy in Cancer of the Uterus. (*Gazette des Hôpitaux*, Jan. 21.)

453. BALHOES AND MAGALHAES.—A Case of Human Actino-mycosis in Brazil. (*O Brazil Medico*, Jan. 12, 1888.)

454. MAGALHAES.—The Relation of the Ovary and Parotid Gland in Disease. (*Revista da Faculdade de Medicina*, Rio Janeiro, January 1888.)

455. SIGHICELLI AND OTHERS.—On the Pathology of General Paralysis. (*Archivio Italiano*, November 1887.)

ART. 433. *Ménétrier on Multiple Adenomata of the Stomach.*—Adenomatous transformations of the gastric glands are met with either under the form of circumscribed tumours (polypi of the stomach, *polyadénomes polypeux*) or of limited or diffuse hypertrophic patches (*polyadénomes en nappe*), distinct histological lesions corresponding to these forms. The term 'polyadenomata' is very suitable to these glandular hypertrophies, and expresses their simple and benign nature. In some cases, however, whose relative frequency is unknown, they become the seat of origin of malignant tumours. The course of events in these cases appears to be a simple nutritive irritation of glandular epithelium, followed by adenomatous hypertrophy, and terminated by an infective epithelioma.

434. *Neumann on Pigmentation.*—The first portion of this paper deals with the origination of hæmatoidin and iron-containing pigment (hæmosiderin) in extravasations and thrombi. In cases in which hæmatoidin and hæmosiderin are found as derivatives of blood-pigment near one another in the same clot, at a certain stage of the process they are arranged in concentric zones. The former is found principally in the clot, and only in the peripheral portion of that; the latter exists in a more or less wide zone of surrounding tissue, and in the intermediate zone between clot and tissue both are present. The author concludes that hæmosiderin is only formed from those corpuscles which come in contact with tissue, those which remain enclosed in the clot affording only hæmatoidin; thus the influence of the living tissues is required for the formation of the former, the latter is independent of such action. The second part of the paper deals with pseudomelanosis. The black pigmentary granules of pseudomelanosis, like the hæmosiderin granules, are found almost always within the cellular elements of the tissues. If microscopic preparations of pseudomelanotic tissues be treated with HCl, a simple solution of the granules is not obtained, but there remain behind sometimes brown, sometimes yellow, sometimes colourless granules, such as are usually found in pathological iron pigmentations of the tissues. Red-brown colorisation, due to iron pigment, often becomes black when the preparation becomes decomposed; a microscopic examination shows black granules quite resembling those of ordinary pseudomelanosis, instead of brown.

435. *Arnold on Pilose Tumours of the Mouth Cavity.*—This very exhaustive paper should be read by all interested in the subject. In a tabulated form are given particulars of thirty-eight cases. As to position, twelve were attached to the palate, ten to the pharyngeal wall, five to the base of the skull,

one to the fauces, one to the tongue and jaw, four to the jaw alone, one to the Eustachian tube, and one is described as extending from the ear to the chin. In several cases the stalk of the tumour perforated the sella turcica, and in some of these the pituitary body was absent. A buccal cleft coexisted in one case, palatine more or less extensive in thirteen, lingual in two cases, inferior maxillary in one case. The condition was either accompanied or unaccompanied by other deformities, and the forms and amount of development of the tumours were very varied. In considering the second part of his paper, the relations of these growths to teratomata, the author divides the tumours into true and false, or, as he thinks they may better be called, heterochthonous and autochthonous teratomata. Heterochthonous tumours are those which take origin from a second embryo, whilst autochthonous are derived from the development of one single abnormal embryo.

436. *Miura on the Pathology of Kak-ke.*—The observations in this paper are based on the examination of the organs of various subjects dead in the hospital in Tokio, Japan. *Central nervous system.*—Vacuolation was observed around the ganglion-cells in the anterior horns of the cord in three cases. Bodies somewhat similar in appearance to corpora amylacea were observed. These differed markedly in reaction from the last-named, more nearly resembling myelin. *Heart.*—Dilatation and hypertrophy of the heart, without valvular lesions, is almost invariably found in subacute or acute cases. Fatty degeneration, described by other authors as constant, was only rarely present in the author's experience. *Lungs.*—Œdema glottidis was once present. Thrice hyperæmia and œdema of the lungs. *Kidneys.*—Stroma, infiltrated with round cells; here and there, especially in the neighbourhood of the glomeruli, an increase of connective tissue; walls of small vessels thickened. Glomeruli rich in nuclei (normal, increased, or diminished in size), their capsules thickened and much nucleated. These changes most closely agree with the condition of glomerulo-nephritis. (The urine was decreased in quantity, acid, with traces of albumen.) The author is not certain whether these changes have any connection with the condition of the heart or not. *Muscular system.*—Changes especially connected with kak-ke: (*a*) some fibres are greatly swollen, clouded with a finely granular substance, and appear as thick cylindrical or spindle-shaped figures in which can be seen with difficulty a few longitudinal streaks; (*b*) others also swollen and cloudy show here and there nodular processes which are clearer and more glistening than the fibres around; (*c*) other also swollen fibres possess no striations, and contain within their sarcolemma clear, grey, and strongly glistening discs or irregularly coiled knots, either close together or separated by short distances. This altered muscular substance is coloured diffusely but weakly by carmin, saffranin, &c. These changes most closely correspond to Zenker's waxy degeneration.

437. *Lubarsch on the Co-existence of Carcinoma and Tubercle.*—With respect to the co-existence of cancer and tubercle the author's observations lead him to conclude as follows. 1. The comparatively rare co-existence of these diseases is not completely explained by the different period of life at which the two most commonly occur. 2. It is not correct that carcinoma of any given organ (œsophagus, Lebert) predisposes to tuberculosis. 3. Acute infective diseases, as also phthisis, are strikingly less common in those suffering from cancer, than in those of a similar age, who are not so affected. 4. Tuberculous affections, as well as chronic local lesions, may favour the development of a carcinoma.

438. *Krysinski on a Rare Anomaly of the Hymen.* In the tolerably thick round hymen there was found on the left side below a small irregular opening, hardly admitting a five-millimètre probe, and above and towards the middle line a projection about twice as large, which was formed of a reduplication of the mucous membrane of the hymen, and was not unlike a semilunar valve of the aorta. This was slit from above for about half its extent. The urethra opened about 2-3 centimètres behind the hymen in the vagina, the urine passing through the opening in the hymen.

439. *Sutton on Congenital Fissures of the Mouth.* In this paper Mr. Sutton describes a number of unusual fissures of the face, amongst which may be mentioned:—1. *Median hare-lip* in a child affected with coloboma and other malformations. In this case the ethmo-vomerine plate and consequently the septum nasi and premaxillary bones were absent. Similar median clefts are described by Mr. Sutton in a breed of pugs. 2. *Macrostoma.* The child, when born, was found to possess an unusually large mouth, the angles of which gradually passed into a red cicatrix. This scar in its turn ended in a gaping recent wound over the temporal region extending to the dura mater. The condition was symmetrical. 3. Congenital depression in the cheek allied to branchial fistula. The child, aged 7, presented, on the right side of the cheek, $1\frac{1}{2}$ inches behind the angle of the mouth a small depression surmounted by a tiny cutaneous nodule. The depression was about 1-16th inch deep. Corresponding with it on the mucous membrane of the mouth was a white cicatrix $\frac{1}{4}$ inch in diameter. On the left cheek, $1\frac{1}{2}$ inches behind the angle of the mouth, was a small congenital cutaneous elevation. The pinna on this side was defective, and the external auditory meatus covered with skin. Mr. Sutton considers these appearances to be due to faulty closure of the edges of the mandibular cleft.

440. *MacMunn on Addison's Disease.*—At the conclusion of this highly interesting and scientific paper, the author remarks that as the animal body became more complex in the course of development, and a greater abundance of respiratory pigments became necessary for internal and ordinary respiration, certain organs had to be set apart, or had to take a new function, in the increased 'division of labour.' This function in the case of the adrenals was the removal from the circulation of useless and worn-out pigments and their accompanying pigments. When the adrenals are diseased, these effete pigments and effete proteids circulate in the blood; the former, or their incomplete metabolites, producing pigmentation of skin and mucous membrane, and appearing often in the urine as urohæmatoporphyrin; the latter producing toxic effects, and leading to further deterioration of the blood with its consequences.

441. *Sutton on a Parasitic Fœtus.*—Mr. Bland Sutton gave a short account at the Pathological Society of the interesting monstrosity at present being exhibited in London. The subject, 'Laloo,' is a male, aged 17, from Oudh. The parasite is

chiefly attached to the epigastric region. It consists of the structures forming the shoulder-girdle, including the integuments, which bear a pair of nipples; and of a second part, including the buttocks and lower extremities. The pubes is hairy, the penis well formed, and its glans uncovered, urine occasionally passing from it. The anus appears to be imperforate. The arms are long, and both extremities present deformities. The complete separation of the shoulder-girdle from the lower parts of the parasite is to be noted. [When seen by the reporter, urine was passing from the penis of the parasite, the boy stating that he had no control over its flow. The temperature of the parasite appeared to be considerably lower than that of the autosite.]

442. *Senator on Transudation.*—The author's observations on the transudation of fluid into the connective tissue or into serous cavities without obvious tissue-alteration, and especially without inflammation, are as follows. All transudations, without exception, contain albumen in solution, but in less quantity than the blood-plasma. It is least in quantity in normal transudation-fluid, and in œdema of the skin. The albumens of transudations are the same as those of the blood-plasma (serum-albumen, globulin, fibrinogen). Little is known about their relation to one another, and to the quantity present in the blood-plasma. The amount of salts present in transudation is everywhere almost exactly equal, and fluctuates within narrow bounds about the average amount present in the blood-plasma. Not uncommonly the amount exceeds that present in the blood-plasma of the same person. This is especially true of sodium chloride. Besides the salts are present in all transudations non-colloid bodies dissolved in the blood, which never occur in true glandular secretions, such as biliary colouring matters and hæmoglobin. Other bodies than those present in the blood are never found in undecomposed transudations. The specific and elective action of the gland-cells is wanting in the tissues, which supply the transudation. Nothing can be learnt about the influence of blood-pressure changes on the transudation by filtration experiments external to the living body. Increase of the venous pressure causes an increase of the quantity of transudation and of its albumen, whilst the amount of salts (NaCl) is not markedly altered. Increase of the arterial pressure (active hyperæmia) appears also to increase the transudation. Nothing certain is known about the alterations in the amount of albumen in simple arterial hyperæmia. Division of the sympathetic nerve appears to increase the amount of albumen. The amount of salts is not markedly increased by arterial hyperæmia.

443. *Spronck on Lesions of the Spinal Cord.*—Anæmia determines necrosis of nerve-cells more rapidly than has been up to the present admitted. The resistance which they appeared to present in the experience of Stenson is only apparent; in reality they rapidly die, if collateral circulation does not prolong their existence. The author believes ten minutes to be the duration of resistance to complete anæmia. This appears to agree with the immediate abolition of motion and sensation observed on tying the aorta. Thus the centres of the cord do not differ notably from those of the medulla and brain which, as Hayem and Barrier have shown, become definitely inert twelve minutes after decapitation. The partial necrosis observed did not appear to warrant the supposition that the dead cells were less resisting than those which remained healthy. The fact that the peripheral zone of the anterior cornu has more resistance than the central part seems to show that the vascular distribution is the cause; the former being supplied by several small arteries, the latter only by one passing through the anterior fissure. Ehrlich and Brieger have pointed out that irritative symptoms often follow relaxation of the ligature; this they attribute to incomplete necrosis of the cells with their subsequent irritation by return of blood. The author has only once observed this. In this case the ligature was relaxed after an hour; two hours afterwards the animal uttered cries, and all the posterior muscles were affected with fibrillar contractions. However, a re-establishment of function was looked for in vain, the paralysis being complete and permanent.

444. *Krönig on Phosphoric Hepatitis.*—The paper is based on observations made on dogs. The poison which circulates in the blood exerts its evil influence first on the corpuscles, which are either caused to shrink or become degenerated in a hyaline manner temporarily. The blood thus deprived of its nourishing power injures the endothelium of the vessels, and finally the walls themselves, which are affected with hyaline degeneration. Almost at the same time the cells of the parenchyma are affected, the poison attacking the protoplasm, and, through partial or complete destruction of its normal granules, causes its disappearance by the formation of vacuoles, or, without visibly attacking the protoplasm, the nucleus may be attacked, and by a series of events, which are described, be destroyed. Or, finally, protoplasm and nucleus may become the object of attack at the same time, the result of which, if not complete destruction, is at least a serious injury to the cells. The damaged cell-substance either remains or is absorbed; in either case it exerts an irritative action on the portal connective tissue, which seeks to make good the loss by a cellular proliferation. Ackermann's opinion that the proliferation of the connective tissue is a healthy process is incorrect, according to the author, for since the necrotic material is scattered through the whole acinus, any separation of dead from living tissue must take place in the acinus itself, and not at its periphery. The new formation of tissue serves first to fill up the place of the lost parenchyma, but secondly exceeds this duty, and takes on independent hyperplastic action. We have not to do with an inflammatory hyperplasia in chronic phosphorus poisoning, though it may be present in the acute or subacute form.

445. *Hayem on Death by Hæmorrhage.*—In death by hæmorrhage the anæmia of the head causes progressive paralysis of the encephalo-bulbar centres. Most of these, before being paralysed, are stimulated to excess, as in death by asphyxia. Amongst the more important functions respiration is the first to disappear, although the automatic respiratory centres are the last to survive of the cerebral centres. A short time after the suspension of respiration there occur almost simultaneously stoppage of the heart, respiratory convulsions, complete abolition of the corneal reflex, and vaso-motor paralysis. At this moment respiratory convulsions acquire all their energy, and transfusion of blood is ineffectual. These last phenomena take place at so brief an interval from one another that experiments made by bleeding animals leave it uncertain as to whether

stoppage of the heart is due to peripheral or central paralysis. In other words, the question remains open as to whether paralysis of the heart causes death of the head, or *vice versâ*. But experiments in which all four arteries of the brain are ligatured in rabbits show that the heart goes on acting as long as oxygenated blood is supplied to it. In death by hæmorrhage, then, paralysis of the heart is the consequence of anæmia of the intracardiac ganglia, and the obstacle to late transfusion is the complete paralytic exhaustion of these centres. The time in which this takes place is very short, as shown by the failure of transfusion when the stoppage of the heart has taken place about a minute. The intracardiac nervous centres then appear to be more vulnerable than the cephalic. Stoppage of the heart is the most important accident, and explains the importance of maintaining respiration and thus a supply of oxygenated blood in cases of syncope. The author believes the fatal syncope of typhoid fever to be due to cardiac lesions.

BERTRAM C. A. WINDLE, M.D.

446. *Sänger and Fürst on Tumours of the Abdominal Wall.*—Sänger divides tumours of the abdominal wall according to their anatomical seat of origin; namely, tumours arising—1, from the subcutaneous connective tissue; 2, from the perichondrium and periosteum of the ribs and pelvis; 3, from the aponeuroses of the muscles; 4, from the muscles; 5, from the subperitoneal connective tissue; and 6, from the peritoneum. Dr. Fürst adds epidermic tumours, such as epithelioma, and tumours arising from internal organs and invading the parietes. The muscular aponeuroses are the chief seats of origin of tumours of the abdominal wall, and the commonest kind of new growth is consequently a 'desmoid' or fibroid mass, often in reality fibro-myomatous, like similar growths in the uterus. Yet fibro-sarcoma, fibroma mucosum, and myomatosum, cystofibroma, cysto-fibrosarcoma, round-celled sarcoma, and lipoma are also developed in the same situation. The innocent forms are much more frequent than the malignant. Although these tumours, with the exception of fibro-myoma of the round ligament, are found in both sexes, they are best known to gynæcologists. Dr. Fürst describes an instructive case where a married woman, aged 26, came under his care suffering from an oval tumour, 'the size of a goose's egg,' below the right hypochondrium. About two years previously, she struck her right epigastric region against one corner of a table. The pain was trifling at the time, and soon passed away, but gradually a tender swelling formed; it grew very slowly. The patient's general health was excellent. The tumour was enucleated from its aponeurotic capsule with some difficulty, and a small process, which appeared to be entirely fibrous, like normal tendon, was found to extend so high, and to lie so deeply under the ribs, that it was left behind; the peritoneum was not injured. The patient made a good recovery. The tumour was firm and partly flesh-coloured, as though made up of muscular fibre and fascia, partly pale and fibrous in appearance, as though consisting of connective tissue. The microscope showed that large fusiform cells, with large nuclei, which stained very deeply, predominated in sections of the tumour. These cells were abundant in the reddish, flesh-coloured parts of the growth, running in bundles which lay in different directions, separated by a very scanty amount of well-formed connective tissue. Thus, according to Dr. Fürst, the tumour consisted of young connective tissue, rich in cells, so that it was either an innocent spindle-celled sarcoma or fibro-sarcoma, or else a 'desmoid' tumour after Sänger's definition, consisting chiefly of tendon tissue derived from the surrounding aponeuroses. It appears easy to believe that inflammatory irritation, and the consequent increased afflux of nutrition to the part, fully account for the development of a parietal tumour of the abdomen after an injury, but we cannot explain why violent blows so often fail to produce tumours. The precise change which sets the tumour growing is a proliferation of young connective-tissue cells, so that the tumour becomes a fibro-sarcoma. When plain muscular tissue lies near, as in the uterus, or round ligament, it is easy to understand why the tumour should be 'mixed,' and the theory that connective-tissue cells may turn into plain muscle-cells is therefore superfluous in this case, if not entirely incorrect. Dr. Fürst considers that his tumour was in no sense mixed, being a pure 'desmoid' connective-tissue growth. [On the other hand, the distinction between a plain muscle-cell and a spindle-cell is often extremely difficult.—*Rep.*]

447. *Maas on an Intestinal Diverticulum forming an Abdominal Tumour.*—A boy, aged 14, had been subject, from shortly after his birth, to a tense abdominal tumour. During infancy it caused little or no trouble; when the lad was 13 years old, dyspnœa and palpitations occurred. On admission into hospital, the abdominal integuments appeared tense, anæmic, but not œdematous; some subcutaneous veins were uniformly dilated. The widest girth, three inches above the umbilicus, was thirty-nine inches. The resonance was uniformly tympanitic, least so in the flanks. No solid tumour could be detected. Albumen was found in the urine on the first day after admission into hospital, but not later. The bowels were frequently moved; the excretion of urine was normal. Much fæcal matter was brought away after injection, then a sound introduced into the rectum could be plainly felt through the parietes, as though in front of the tumour. Congenital hydronephrosis of the left kidney or cystic degeneration of that kidney was diagnosed. Fæces escaped through the trocar when an exploratory puncture was made in the left loin. On opening the abdominal cavity in the middle line, large veins were seen on the surface of the suspected tumour. The operator did not think it advisable to proceed further, so he closed the wound and believed that there was a cystic kidney communicating with the intestine. The patient recovered from the operation, but the swelling and dyspnœa increased, and he ultimately died suddenly. The tumour proved to be a gigantic diverticulum from the upper part of the rectum; it contained fourteen litres of thin fæces, and much gas. The aperture of communication (diameter not mentioned) lay at the posterior inferior aspect of the diverticulum. The rectum was strongly compressed by the tumour. A disturbance in the normal involution of the layers of the blastoderm appeared to account for this rare malformation, according to Dr. Maas and Professor Kölliker, who were present at a demonstration of the case before a society at Würzburg.

ALBAN DORAN.

448. *Impacciante on Tumour of the Mediastinum implicating the Heart.*—The patient, a married country woman, aged 40, was received into the St. John's Hospital, Rome, in May 1887. Her illness began with pain in the left side six months ago, but

was unaccompanied by cough or sputum. She soon got better and returned to work. Gradually, however, she began to suffer from oppression at the precordia, and difficulty in swallowing solid food. She then came to the hospital. She was very feeble and suffered from severe dyspnœa on the slightest exertion, or when lying down. She was unable to swallow liquid or solid food. There was some distension of the jugulars, but no enlargement of the cervical glands. The left side was almost motionless during respiration. There was dulness on percussion on the left side from the third rib downwards, and absence of respiratory murmur. Puncture with a hypodermic syringe showed the presence of fluid at the lower part, but not at the upper. There was no cardiac murmur. An œsophageal bougie was passed easily for a certain distance, but then met with complete obstruction. The patient was supported by nutrient enemata, but died in about a fortnight. At the inspection the right lung and right pleural cavity were normal. The left lung was airless, and the lower lobe presented the appearance of atelectasis from compression. The two pleural surfaces were firmly adherent at the upper part of the lower lobe, shutting off a small fluid effusion, which occupied the lower part of the pleural cavity, but did not displace the heart. On opening the pericardium general adhesions were found, but they were readily torn through. When the heart was removed, it was found that the walls of the left auricle were completely occupied by a new growth which did not injure the endocardium, but entirely replaced the muscular substance, being limited below by the fibrous ring at the auriculo-ventricular opening, and to the right by the inter-auricular septum. In consistence the tumour was soft and friable, of a whitish colour on section, and on scraping gave a thick white juice. The external surface of the tumour was irregular. The left auricle was enlarged by the new growth to the size of an orange. There was no valvular lesion. When the heart had been removed, it was noticed that a considerable part of the new growth, having the same characters, occupied the posterior mediastinum, being limited in front by the pericardium, and laterally by the pleura. Behind, the growth was attached to the vertebral column, but without any apparent alteration in the bodies of the vertebræ or in the ligaments. Below, it extended to the vault of the diaphragm ; above, it reached the bifurcation of the trachea. The part of the tumour between the pericardium and the mediastinal pleura involved the root of the lung, and surrounded the left bronchus, which it tightly compressed. The arch of the aorta remained free, but the descending aorta was surrounded; and, though its walls were not injured, the intercostal arteries proceeding from it were obliterated. The œsophagus was compressed, and pushed towards the left, but was not completely encircled. On opening it, there was observed at the point of greatest compression, at the level of the bifurcation of the trachea, a small ulcer of the lining membrane, oval in shape, of the size of a *soldo*, with soft edges and greyish base. The brain and the abdominal viscera were very carefully examined, but no secondary growths were found. On microscopic examination, the tumour was found to consist of nucleated round cells, with a very scanty intercellular substance, and a reticulum such as is found in lymphatic glands. In places the meshwork was larger, and was filled with endothelial cells, containing one or two nuclei. The tumour was considered to have originated in the bronchial glands, of which no trace remained, and to have spread by the lymphatics.

H. HANDFORD, M.D.

449. *Bard on Leukocythæmia considered as a Cancer of the Blood.*—The characteristic features of leukocythæmia are the permanence of the changes in the blood, and its inevitable termination by cachexia and death. Leukocytosis is only a symptom, due to a variety of causes, but leukocythæmia is a pathological entity, of which the physiology is obscure and the etiology unknown. Leukocythæmia commences by a multiplication of the white corpuscles, with a tendency to persist and increase, just as in cancer, which it also resembles by its resistance to all known methods of treatment. The abnormal condition of the blood gives rise in different parts of the economy to neoplastic nodules resembling in structure the lymphatic glands, but in reality constituted by an enormous dilatation of the capillary system. The increase in the number of white corpuscles is accompanied by the appearance of a large number of embryonic leucocytes—sometimes in the proportion of 80 to 1 white corpuscle. The course of the malady concords with our clinical experience of cancer. The multiplication of the leucocytes precedes and does not follow the neoplastic lesions which are caused by the obstruction of the capillaries to which they give rise. The malady presents all the appearance of a diathesis, and, inasmuch as every tissue is capable of being the seat of a neoplasm *sui generis*, there is nothing inconsistent in the idea of a cancer of the blood, which is a liquid tissue. Malignity is the character of a malady, not of a tissue, and the absence of a tumour is explained by the nature of the medium.

450. *Vinay on the Etiology of Ulcerative Endocarditis.*—Ulcerative endocarditis is not caused by any one set of causes, but is due to various descriptions of micro-organisms, which possess in common the property of giving rise to suppuration. This variety in causation does not affect the entity of the disease, which preserves its individuality whether it appears as a primary affection or supervenes as a complication of some pre-existing disorder, not only on account of the mechanism of its production, and its well-characterised symptoms, but, finally, its dreaded clinical significance. ALFRED S. GUBB.

451. *Handford on a Case of Aneurysm of the Aorta communicating with the Pulmonary Artery.*—In the *Edin. Med. Jour.*, February 1888, p. 695, Dr. Handford records a very interesting case of a man, aged 35, who was under his care in January 1886, suffering from marked orthopnœa and considerable præcordial pain. There was no history of rheumatism, and a doubtful one of syphilis. He had been able to work until about three months before admission into the hospital. Pulse was 120, irregular, small, feeble, and fluttering, but no difference on the two sides. Cardiac pulsation was heaving and diffused, extending to the left 1½ inches beyond the nipple line in the sixth interspace, but was most visible in the third left interspace, extending from half an inch to the left of sternum to 3 inches from the sternum. There was a marked systolic thrill over this pulsating area, where a harsh systolic murmur was also heard. The cardiac area, as estimated by percussion, extended vertically 7 inches in the parasternal line, and 6½ inches transversely at the level of the fourth costal cartilage from a point 2

inches to the right of the sternum. There was great engorgement of the veins of the neck, the jugulars pulsating markedly, and filling quickly from below. No treatment seemed to benefit the patient, as he gradually became worse, and died seven weeks after admission. On *post mortem* examination the pericardium was found to contain about 6 ounces of straw-coloured fluid ; the right auricle and ventricle were very much dilated. The conus arteriosus of the right ventricle corresponded with the third left interspace, and the pulsation observed there during life must evidently have been due to the walls of the conus arteriosus. Between the commencement of the aorta and the pulmonary artery, adherent to and fused with both, was a rounded swelling about as large as a walnut, which was found to be an aneurysm arising from the aorta. On slitting up the pulmonary artery an opening about as large as a threepenny piece, and crossed by a narrow bridle, was found half an inch above the valves leading into the aneurysm. The left auricle was empty and very small, and the left ventricle was contracted. The aneurysm arose from the first part of the aorta, about half an inch above the valves, and was intra-pericardial. The heart, with the aortic arch aneurysm, and 1½ inches of the pulmonary artery, weighed 19¼ ounces. RICHARD NEALE, M.D.

452. *Troisier on Supra-clavicular Adenopathy in Cancer of the Uterus.*—The *Gazette des Hôpitaux* publishes a report made by M. Troisier at the Société Médicale des Hôpitaux on M. André Petit's treatise concerning the existence of enlarged supra-clavicular glands in cancer of the uterus. M. Troisier stated that he had met with several cases of uterine and ovarian cancer, accompanied by enlarged glands in the supra-clavicular region, in which no intermediary glands could be detected elsewhere. This symptom may also be met with in cancer of the abdomen, as well as in cancer of the stomach or of the thorax. It should be looked upon as contra-indicating surgical interference in such cases. W. VIGNAL.

453. *Balhoes and Magalhaes on Human Actinomycosis.* — A case of actino-mycosis in man is reported from Brazil by Drs. Balhoes and Magalhaes (*O Brazil Medico*, Jan. 12). They believe it to be the first time that this disease has been recognised as occurring in any part of South America. The case was one of a Brazilian, aged 22, a gardener, who, some ten years previously, when employed in a cattle-breeding establishment, sustained a contusion in the left hypochondrium through a fall from his horse. This suppurated, and never completely healed. When first seen there was an area of infiltration and induration about 4 centimètres across over the false ribs and their cartilages on the left side, with many fistulous openings exuding sero-pus. The diagnosis was made of tuberculosis of the skin. After some months of treatment there was no improvement, and accordingly the sinuses and infiltrated parts were scraped, and soon after the part became intensely painful, and the symptoms got progressively worse, neuralgic intercostal pain being a very prominent symptom. The patient had been under observation for just a year (from May 1886 to May 1887), when, in consequence of the interest which Dr. Israels' observations as to human actino-mycosis had excited, it occurred to Drs. Balhoes and Magalhaes to subject the exudation from the fistulous tracks to microscopic examination, when the characteristic radiated granules were found to be present. These were soon after discovered in the sputum. Phthisical symptoms soon developed, and the patient died of exhaustion about six months later. The *post mortem* showed that the left lung was infiltrated and broken down into abscess cavities at its base, but there was no direct communication with the original deposit in the hypochondrium. There were secondary mycotic deposits in the heart, the liver, and spleen, and notably upon the surface of the left cerebral hemisphere, where the effects of general infiltration appear very rarely to be found.

454. *Magalhaes on Coincident Ovaritis and Parotitis.*—Dr. Pedro de Magalhaes contributes to the *Revista da Faculdade de Medicina* of Rio Janeiro an account of a case illustrating the supposed connection or correlation in disease of the ovary and the parotid gland. The case was one of coincident ovaritis and parotitis, the constitutional disturbance and the signs of inflammation being well marked. Dr. Magalhaes considers that the somewhat frequent occurrence of parotitis after operations or injuries involving the abdominal cavity, and especially after ovariotomy or kindred operations, is a clinical fact not to be explained by vague notions as to metastasis or sympathy. He reviews the literature of the subject, and refers especially to Mr. Stephen Paget's article and collection of cases published in the *Lancet* of April 17, 1886. WALTER PYE.

455. *Sighicelli and Others on the Pathology of General Paralysis.* — In the *Archivio Italiano*, November 1887, there is a description of a case of general paralysis coming on in a congenital imbecile who had been epileptic from infancy. He had learnt to read and write, though with difficulty. When he entered the asylum of Ferrara he had symptoms of scurvy. He was troubled with insomnia and ideas of persecution. Later on the ordinary symptoms of general paralysis supervened, ideas of grandeur, inequality of the pupils, fibrillar contractions of the muscles. The case lasted five years. The naked-eye appearances after death presented the usual signs of general paralysis, suffusion of blood under the membranes of the brain, with adhesions at other places. Under the microscope there was found a diffused sclerosis both in the grey and white matter of the brain, with proliferation of the neuroglia, and pigmentary and fatty degeneration of the nerve-cells. Amylaceous corpuscles were also observed in the cerebral tissues. Dr. Celso Sighicelli, who records this case, observes that the supervention of general paralysis on other forms of insanity is rare. He only knows of one instance of general paralysis affecting an imbecile (there are more on record), but the supervention of general paralysis on epilepsy is not so uncommon. In the same number of the *Archivio* Dr. Rezzonico describes the results of his microscopic examination of another case of general paralysis. The most noteworthy appearance was the blocking up of the lumen of the minute vessels of the brain by a homogeneous transparent substance which could be separated from the vessels. It resisted the ordinary tests for fatty and starchy matter. The author is doubtful whether these appearances were not the result of changes after death. Dr. Rezzonico's paper is illustrated by two lithographed figures. Professor L. Bianchi has examined the condition of the peripheral nerves in general paralysis : he finds degenerative changes especially in the motor nerves. W. W. IRELAND, M.D.

ANATOMY.

RECENT PAPERS.

456. LANE.—On the Mechanism of the Human Foot. On Deformities which Develop during Young Life. (*Guy's Hospital Reports*, vol. xliv., p. 252.)

457. TUCKERMAN.—On the Taste Areas of the Pig. Note on the Papilla Foliata and Other Taste Areas of the Pig. (*Anatom-Anzeiger*, Jahrg. iii., Nos. 2 and 3, sect. 69.)

458. WILSON, J. T., M.B.—On the Axillary Muscular Arches (Observations on the Innervation of Axillary Muscular Arches (Achselbogen) in Man, with Remarks on their Homology suggested by Comparative Considerations. (*Journal of Anat. and Phys.*, vol. xxii., part ii., p. 294.)

459. STRECKER.—On the Occipital Condyles. 'Ueber die Condylen des Hinterhauptes.' (*Arch. für Anat. und Entwick.* Jahrg. 1887, Heft 6, s. 301.)

460. SUDDUTH, DR. W. X.—Development of Bone. (*New York Medical Record.*)

ART. 456. *Lane on the Mechanism of the Human Foot.*—In the course of a paper on flat foot and other deformities, Mr. Lane deals with the mechanism of the foot, his observations being as follow :—The ordinary description of the inferior calcaneo-scaphoid ligament and its relation to the tendon of the tibialis posticus is, he thinks, incomplete and inaccurate. The tendon of the tibialis posticus passes from the groove behind the inner malleolus on to the inner aspect of the deltoid ligament of the ankle-joint, from which it passes on to a ligament described by the author as the superior internal calcaneo-astragaloid and thence to the tubercle of the scaphoid. In the active erect position the tendon of the tibialis posticus does not occupy an inferior relationship to the head of the astragalus, nor does it lie beneath an inferior calcaneo-scaphoid ligament attached to the lower margin of the scaphoid. It lies internal to the head of the astragalus and opposes its movements inwards. The superior internal calcaneo-scaphoid ligament is crossed internally by the tendon of the tibialis posticus. This ligament is continuous with the inferior calcaneo-scaphoid, and is attached to the inner and back part of the sustentaculum tali, passing forwards and upwards, from thence to the tubercle of the scaphoid and outwards and forwards to the posterior and upper margin of the same bone. This ligament opposes the movement of the head of the astragalus, in a direction opposite to that produced in it by the contraction of the tibialis posticus, which is outwards. The elongation of the inner margin of the foot during the tread is not due to the yielding of an elastic inferior calcaneo-scaphoid ligament, as is usually described. As to the question of the relative horizontal levels of the tubercles of the os calcis, he remarks : 'It is obvious from the relative thicknesses of the epidermic covering of the heel that the outer tubercle occupies at least as low a level as the internal in the active erect posture.' The action of the tibialis posticus is to press directly upon the inner aspect of the head of the astragalus, tending to force it outwards, and in so doing it shortens the inferior and still stronger superior internal calcaneo-astragaloid ligaments, forcing the head of the astragalus backwards and outwards. This muscle, by its contraction, also adducts the second row of the tarsus upon the greater process of the os calcis. In the position of adduction the convexities of the several arches of the foot are increased, and therefore strengthened in their capacity of transmitting pressure. It is obvious that the position of partial adduction of the foot is that best suited mechanically to transmit great superjacent weight, and we may conclude that it is the one habitually assumed in the active erect posture, and that the position of abduction is that assumed in the easy erect attitude. Excessive rotation of the os calcis Mr. Lane believes to be the chief determining factor in the development of flat foot.

457. *Tuckerman on the Taste Areas of the Pig.*—After a sketch of the former work on the subject of his paper, the author details his own observations as follow :—*Papilla foliata* consists of four or five rather irregular folds, with slightly rounded crests, separated by furrows, which vary much in breadth and slightly in depth. Serous glands and ducts are very abundant at the base of the folds. Mucous glands exist sparingly. The tastebuds of this region are rather smaller than those of the circumvallate area ; the number on each papilla was estimated to be 2,400. *Papillæ circumvallatæ.* — The interior contains serous glands, which are also found at the base and in the trench around. The tastebuds of this area are very numerous and are usually in contact by their edges or overlap one another. They are placed around the sides in a zone of 25 or 30 tiers, the uppermost tier being often well up towards the summit of the papilla. The author estimates 6,000 buds for the two papillæ. *Papillæ fungiformes.*—In one tongue in which the papillæ foliatæ were wanting, many papillæ fungiformes contained tastebuds. These were usually disposed at the upper part of the papilla, sometimes at the side, never at the base.

458. *Wilson on the Axillary Muscular Arches.*—From an examination of the nerves of the muscular bands found passing across the axilla from the latissimus dorsi, in many cases the author deduces the following conclusions : (1) The axillary muscle (Achselbogen) is quite distinct from, and independent of, the dorso-epitrochlear muscle. (2) It is not derived by a process of imperfect segmentation from the stratum of muscular tissue, of which the pectoralis and latissimus dorsi muscles are segments. (3) It is simply a representative of the humeral portion of the panniculus carnosus.

459. *Strecker on the Occipital Condyles.*—After discussing the comparative anatomy of the occipital condyles, the author makes the following observations on their anthropological significance. He recognises three types, as follows :—1. The condyles are very little elevated from the base, and broad. Their sagittal measurement is shorter than usual, and only a little larger than their transverse. The curve is very slight. This type might be called the African, as it is chiefly found amongst negroes. Besides a number of African skulls, this type was found to exist in some Kalmuks, Turks, Malays, Maories, and also in some Europeans, as, for instance, in two Greek and two Lapp skulls. 2. In the second variety the condyles are very long in the sagittal direction, small in the transverse, stand far out from the basis, and have a tolerably strong sagittal curve. Asiatics are well represented in this type, especially Malays and Japanese. A few Papuans, one Peruvian, and a Mexican, and of Europeans only a few Romans possessed it. 3. Between these two types stands a third, in which

the condyle is of middle height, more elevated anteriorly than posteriorly. The sagittal is to the transverse diameter as 4–5 : 1. This is the form of condyle which is generally described, and is most common. It is possessed by few Africans. Among Asiatics—Japanese, and Chinese, and a part of the Turco-Mongols and Mongols, possess it. So do the inhabitants of New Pomerania and New Mecklenburg, all the American Indians, and practically all Europeans. Amongst anomalies and alterations in the bones near the condyles, and affecting the joint, the following are described :—(1) Synostosis between atlas and occiput ; (2) articulation of the odontoid process with the basi-occipital : these two were met with in two cases each ; (3) an exostosis between the condyles at the anterior border of the foramen magnum without an articular surface : also twice seen ; (4) abnormal shape of the condyles ; in three cases, besides other alterations, the condyles were broader than they were long ; (5) paracondyloid exostoses on the occipital bone were found in two cases. BERTRAM C. A. WINDLE, M.D.

460. *Sudduth on Development of Bone.*—Dr. W. X. Sudduth, of Philadelphia, after defining the terms 'ossification-bone' and 'osteoblast,' laid down as the result of his study of developing bone that the white blood-corpuscles were the basis of all the connective-tissue group. He emphasised the point that the osteoblast did not become calcified. In the process of calcification the secretion took place around and not in the cell, the calco-spherules joined, and solid bone was formed. This deposit of bone-salts took place in the interstitial protoplasm. As the ossification began, the first deposit of bone was at the periphery of the system, and as it approached the centre it was self-limiting. As calcification progressed, the osteoblast decreased in size and its envelope grew thicker. He quoted several authorities and their definitions of the different kinds of bone according to their development. His own definition of bone was that it was an aggregation or conglomeration of calco-spherules. His own division of bone according to its development was (1) interstitial, (2) intermembranous, (3) subperiosteal, (4) intercartilaginous. By interstitial bone he meant those bones which were not preformed in cartilage and in which ossification took place prior to birth. The paper was illustrated by many microscopical specimens of developing bone, which were beautifully stained and mounted.

SURGERY.

RECENT PAPERS.

461. M'ARDLE.—On Enterectomy and Enterorrhaphy. (*Dublin Journal of Med. Sciences*, January 1888.)

462. WEIR.—On the Technique of the Operations for the Relief of Intestinal Obstruction. (*New York Medical Record*, Feb. 11, 1888.)

463. BERNAYS.—On Total Excision of the Tongue. (*St. Louis Med. and Surg. Journ.*, December 1887.)

464. NICAISE.—On the Treatment of Hydrocele by Dissection and Excision of Tunica Vaginalis. (*Revue de Chirurgie*, No. 2, 1888.)

465. THIRIAR.—On the Means of Determining the Number and Condition of the Kidneys in Cases of Proposed Nephrectomy. (*Revue de Chirurgie*, Nos. 1 and 2, 1888.)

466. RICHARDSON.—On the Surgical Treatment of Inflammation and Abscess in the Region of the Cæcum. (*Boston Med. and Surg. Jour.*, Jan. 24, 1888.)

467. WENZEL.—On Gritti's Amputation. (*Berliner klin. Wochensch.*, No. 3, 1888.)

468. BROWNE.—On the After Treatment in Cases of Herniotomy. (*Dublin Journal of Med. Science*, January 1888.)

469. BURCKHARDT.—On the Treatment of Retro-Pharyngeal Abscess. (*Centralbl. für Chirurgie*, No. 4, 1888.)

470. JACOBS.—On Resection of the Femur for Ununited Fracture. (*New York Medical Record*, Jan. 14, 1888.)

471. ADELMANN.—On Splenectomy. (*Med. News*, Jan. 28, 1888.)

472. NIEHANS, DR. P.—The Treatment of Movable Kidney. (*Centralb. für Chirurgie*, No. 12, 1888.)

473. LOVETT, R. W.—On a Method of Estimating Adduction and Abduction of the Leg in Hip-disease. (*Boston Med. and Surg. Jour*, March 8, 1888.)

474. ORLOFF, DR. LEONID V.—On Trephining the Temporal Bone in Thrombosis of the Transverse Sinus. (*Vratch*, Nos. 4 and 5, 1888.)

475. LEVÏ, DR. GRIGORY L.—Two Cases of Compound Fracture of the Skull. (*Proceedings of the Novgorod Medical Society*, 1887, p. 9.)

476. HARRISON.—On the Possibility and Utility of Washing out the Pelvis of the Kidney and Ureters through the Bladder. (*Lancet*, March 1888, p. 463.)

477. FERRIER.—A Case of Cerebral Abscess. (*Brit. Med. Jour.*, March 1888, p. 530.)

478. GARDNER.—On a Telephonic Bullet-probe. (*Med. Press*, March 1888, p. 269.)

479. SOUTHAM.—On a Case of Epithelioma of Penis and Scrotum. (*Med. Chronicle*, March 1888, p. 494.)

480. OWEN.—On Rickety Deformities of the Lower Extremity. (*Practitioner*, April 1888, p. 261.)

481. BLACK.—The Treatment of Chronic Ulcers of the Leg. (*Provincial Med. Jour.*, April 1888, p. 149.)

482. PHÉLIP, DR.—On Cocaine in Lithotrity. (*Lyon Médical*, March 25, 1888.)

ART. 461. *M'Ardle on Enterectomy and Enterorrhaphy.*—In the *Dublin Journal of Med. Science* for January 1888, Mr. J. S. M'Ardle, of Dublin, gives the following description of an operation he performed in March 1887 on a lad aged sixteen, the subject of a large fæcal fistula in the right iliac fossa. An incision was made seven inches in length, extending from about two inches above the anterior superior spine of the ileum, obliquely downwards and inwards to a point one inch and a half above the middle of Poupart's ligament. The incision was carried down to the peritoneum, which was pushed inwards and upwards, so that the orifice in the bowel might be exposed. This object, however, was not attained without much difficulty ; the tissues were infiltrated with fungous granulation material, and sinuses burrowed in all directions, and it was found impossible to determine the precise seat of the fistula before the injection into the bowel of a considerable amount of a mixture of dilute carbolic solution and milk, when a large stream of this fluid passed into the iliac fossa at its innermost part through an orifice capable of admitting the index finger readily. The peritoneum was then incised along the line of the peritoneal wound, and the contents of the abdomen were exposed. A coil of small intestine was then found lying in front of the cæcum, which coil was distended and fixed to the ileum, opposite the attachment of the vermiform appendix. On raising this coil of intestine and separating it from the ileum an opening was discovered between the two coils at the seat of attachment. The perforated part of the intestine that had been separated from the ileum was brought through

the wound in the abdominal wall, and an elliptical ring resected from the margin of the perforation, and the opening closed with Lembert's sutures. This portion of the intestine having been returned, the cæcum was examined and found healthy. The vermiform appendix, which was embedded in a mass of tissue binding down the ileum to the pelvic wall, was removed near its base, the edges of the opening being inverted, and the opening closed by three Lembert's sutures. The ileum was firmly fixed to the margin of the true pelvis, and extensively diseased. Six inches from the ilio-cæcal valve was a large perforation, from which a channel passed into the false pelvis. Half an inch nearer the cæcum the gut was completely severed, the proximal end opening by a trumpet-shaped orifice into a large irregular channel leading to the opening close to the crest of the ileum. The distal end was firmly fixed to the pelvic wall, and two inches and a half from the cæcum there was a lateral opening capable of admitting one finger. Mr. M'Ardle now broke down the adhesions which bound the diseased intestine to the margin of the pelvis, raised the proximal end to the wound, ligatured the mesenteric vessels, cut the mesentery between the ligatures, and severed the bowel one inch to the proximal side of the large perforation that was situated six inches from the cæcum. A similar course was adopted with the mesentery and the ileum on the distal side of the solution of continuity, the gut being severed at a distance of one inch from the cæcum. The margins of the cut mesentery were sutured and the two ends of the intestine brought together with deep and superficial (Czerny-Lembert's) sutures, the abdominal wound was also closed with deep and superficial sutures, and a large drainage-tube passed from its upper angle out through the opening above the iliac crest. The patient made a good recovery. After the fifth day the temperature remained below 99, and the pulse gradually diminished in frequency. On the twelfth day, when the wound was quite healed, except at the side of the drainage-tube, the patient was allowed to get up. He rapidly increased in weight, and left the hospital at the end of May. In his comments on this case, Mr. M'Ardle refers to the following points of interest. First, the course taken by the contents of the intestine was peculiar. Instead of passing downwards to Poupart's ligament and presenting above that structure, as in most cases, they passed under the cæcum, and, turning over the iliac crest, pointed near the edge of the quadratus lumborum. Secondly, it is unusual to find so many openings exist in the bowel without exciting suppurative peritonitis; and, lastly, the effort of nature to relieve the bowel had been remarkable. Adhesive peritonitis had allowed perforation to occur without extravasation, and with the effect of re-establishing the continuity of the intestinal canal after the abscess had obstructed the ileum. Mr. M'Ardle's paper concludes with an elaborate and instructive analysis of the results of partial and complete resection of the bowel in 212 recorded cases, and a brief review of the methods adopted by different surgeons in performing enterorrhaphy. Statistics prove that a very high mortality attends all attempts at resecting and immediately suturing the bowel in cases of acute intestinal obstruction. In most chronic obstructions such operative treatment, it is held, is advisable; but enterectomy or colotomy is preferable to resection in acute cases, as the patient under the latter condition is prostrate, and unable to bear a lengthened operation, and the walls of the bowel are infiltrated with lymph and fœtid pus. Of 49 resections for artificial anus, 19 were fatal and 2 failed; but the mortality following this operation will, it is thought, diminish greatly when cases are selected, the patients properly prepared, and the minute details of the procedure accurately carried out. The statistics of enterorrhaphy performed for perforating wounds of the abdomen in which the intestines were implicated give a success of almost 1 in 3 cases, which, compared with the results of such treatment in the pre-Listerian age, is held to be most encouraging. Of enterorrhaphy for rupture of the intestine without perforation of the abdominal wall as yet only 8 cases have been reported, 6 of which were fatal.

462. *Weir on the Technique of the Operations for the Relief of Intestinal Obstruction.*—In a paper read at a meeting of the State Medical Society at Albany by Dr. Robert F. Weir, of New York (*The Medical Record*, Feb. 11, 1888), attention was first directed to some points common to both laparotomy and enterotomy. It is pointed out that, although section of the abdominal wall may reveal the presence of suppurative peritonitis as a result of a pre-existent infectious condition, yet, as this may not be found, it is imperative, before any operative interference with the abdominal cavity is begun, that the rules of antiseptic surgery should be strictly followed in the preparation of the hands of the surgeon and his assistants, and of everything that may be carried into the wound during the operation. With regard to the anæsthetic, Dr. Weir, though preferring ether for the ordinary operations in general and abdominal surgery, has recently, in the weakened condition of the patient requiring operative interference for intestinal obstruction, perforation of the intestines, and similar grave conditions, been led from experience to select chloroform for the production of anæsthesia, since with ether he has found cyanosis and bronchorrhœa alarmingly marked and decidedly depressing. Ether, Dr. Weir states, is more unsafe than has been and is now supposed, for, out of 12,000 operations collected from the records of the New York Hospital, there were six deaths from this latter anæsthetic. Cocaine will not insure the quietude that is necessary in handling the intestines in laparotomy, but it might be applicable, it is suggested, to the slighter operation of enterotomy. In a brief description of the operation of enterotomy it is asserted that only in exceptional cases is it permitted to delay the opening of the intestine for twenty-four or forty-eight hours, and thus to obtain greater security against leakage into the peritoneal cavity. This operation, originally devised by Nélaton, is based on the anatomical fact that the presenting loop is usually found low enough down the intestinal canal not to interfere with the subsequent nourishment of the patient, and its distended state is reasonable evidence of its being above the site of the obstruction. With regard to the incision in the abdominal wall in laparotomy, Dr. Weir holds that when a decided swelling, as, for instance, a plainly recognised invagination, or a fairly well-marked tumour exists, it should be made as nearly over the point to be attacked as may be practicable; but, when the nature and situation of the obstruction are unknown, a median laparotomy would be advisable. After alluding to the many difficulties in discovering the seat of obstruction when the incision in the abdo-

minal wall is a short one, and especially to the management of distended bowel, Dr. Weir discusses the relative merits of two methods of overcoming this serious hindrance to the rapid completion of the operation. One may puncture or incise the intestine in order to let out the gas and fluid fæces, but, as has been demonstrated by Mr. Jonathan Hutchinson, punctures made in tense and paralysed intestine frequently leak. It is better, Dr. Weir thinks, to make an incision of about one inch in length in the long axis of the bowel, care being taken to prevent the fluid fæces getting into the peritoneal cavity, and then, after the intestines have been emptied as much as possible of their contents, to follow Madelung's practice and sew up the wound with the Czerny-Lembert suture and prevent the passage of fæcal fluid during the rest of the operation through this part of the intestine by encircling the coil by thread or strands of iodoform gauze carried through the mesentery and around the bowel above and below the wound. Dr. Weir thinks it better to remove the intestines from within the abdomen than to attempt either by puncture or incision to diminish their size. The following is suggested as the more reasonable procedure in laparotomy. After the often fruitless but proper palpation of the cæcum and the usual hernial openings, and a similar attempt to recognise by sight or touch a collapsed knuckle of intestine, the protruding loops should be rapidly drawn out of the wound until a large portion of the small intestines is outside the peritoneal cavity, great care being taken to avoid undue traction on the mesentery. By this procedure the cavity of the abdomen can be readily inspected and quickly examined with the eye or the hand. The protruded mass of intestines can be turned over to either side, and so the large as well as the small intestines can be rapidly and thoroughly explored, and the whole of the abdominal cavity be exposed to view. The necessary corollary to this evisceration is a long incision in the abdominal wall which should reach upwards as far as the umbilicus, and, in many cases, be extended an inch or two beyond this point. After reference to recently devised methods for overcoming the difficulty of replacing the distended intestine within the abdominal cavity, attention is directed to the treatment of the causes of obstruction after such have been found. In all cases in which the cause of the obstruction cannot be safely removed, Dr. Weir advises the making of an artificial anus. Not only is this a quicker procedure, but, in the exhausting conditions such as indicate laparotomy, it is immeasurably safer. In a series of thirty-five resections of the large intestines collected by Dr. Weir the mortality of this operation, undertaken when symptoms of obstruction demanded laparotomy, was 100 per cent., and it has been shown by Reichel that resection of portions of the small intestine in cases of obstruction has a mortality of 75 per cent., whilst, on the other hand, in secondary resections for an artificial anus the mortality is reduced to 37 per cent. If a resection with reunion of the divided ends of the intestine should be determined upon, it is suggested by Dr. Weir that, as has been advised by Kraussold and Senn, a portion of omentum, either partially or totally separated, should be wrapped around the line of the intestinal suture. This speedily adheres, and aids in obviating the risk of fæcal extravasation from a defective suture. It is also held desirable, when such a resection and reunion of intestine have been practicable, to place the newly-united bowel near to the line of the wound just before the latter is closed, and to carry a drainage-tube through the wound down to this place. In some remarks on laparotomy in cases of suppurative peritonitis, Dr. Weir brings forward further evidence in support of the statement of Duplay, of Paris, that in such cases the symptoms of obstruction, even to fæcal vomiting, are very often present. He has recently collected thirteen cases for laparotomy for perforation of the appendix vermiformis, in six of which symptoms of intestinal obstruction existed and caused a resort to the operation without the diagnosis of perforation having been previously made. Should suppurative peritonitis be recognised in the course of a laparotomy, the surgeon should at once make a thorough ocular examination of the region of the appendix vermiformis, and, if a perforation be found in this structure, a ligature should be applied above the opening, and the distal portion of the appendix be cut off. In cases in which, on the performance of laparotomy, peritonitis is found to exist, the peritoneal cavity must be cleansed in a more thorough manner than by the simple introduction of sponges. It should be washed out several times with large quantities of warm and boiled water, or with a 10-per-cent. solution of salicylic acid. Solutions of carbolic acid and sublimate, even when largely diluted, are too poisonous to be used in this manner. Dr. Weir points out that the present treatment after laparotomy differs very much from that which was used ten years ago Opium is abstained from as much as possible, and liquids are given not at all, or only in the most sparing manner, for the first twenty-four or forty-eight hours. If vomiting occurs beyond what might be expected from the anæsthetic, or if distension be not promptly removed by the action of the bowels, or if symptoms of peritonitis should present themselves, the surgeon should not hesitate to follow Tait's suggestion, and administer a saline purge.

463. *Bernays on Total Excision of the Tongue.*—Dr. Augustus C. Bernays, of St. Louis, U.S., has recently reported (*St. Louis Medical and Surgical Journal*, December 1887) three cases of extirpation or total excision of the tongue for cancer, which operation, it is stated, is in no way to be compared with simple excision of the tongue which involves only the anterior two-thirds, leaving the root of the tongue intact, and can be performed through the mouth in a few minutes by means of scissors without any danger to the patient. The removal of the whole tongue with its root from the hyoid bone is a capital operation, and, as pointed out by Dr. Bernays, is always fraught with great danger, because the cases in which this operation is needed are usually accompanied by extensive manifestations of the disease, necessitating the removal of indurated glands, parts of the floor of the mouth, the arches of the palate, parts of the jaw-bone, and even the epiglottis and parts of the pharynx. In the first of his three cases, the patient (a man aged 49) had a painful and ulcerated tumour on the left side of the tongue. This tumour could be traced down in the direction of the root and across the median line into the right half of the organ. After an unsuccessful attempt to remove the tongue by an écraseur passed into the mouth through a wound just above the hyoid bone, Dr. Bernays excised the organ with scissors. The right half of the tongue, which had previously been encircled in the chain of

the écraseur, was cut through close to the hyoid bone, which act was followed by no loss of blood. The same manœuvre on the left side, however, was followed by profuse hæmorrhage, and before this could be arrested much blood had passed into the trachea. The patient became pulseless and ceased to breathe, and it was found necessary to perform a rapid tracheotomy. This patient made a good recovery, and was discharged on the twenty-first day after the date of operation. In the second case, a cancerous tumour of about the size of a hen's egg projected under the chin, and was firmly adherent to the inferior maxilla and also to the skin covering it. Behind, it extended as far as the epiglottis, and on the left side the glosso-pharyngeal arch and the tonsil were infiltrated. The lingual arteries having been tied, and tracheotomy performed, the jaw was cut through in front of the masseter muscle on both sides, after two skin-flaps had been reflected from an incision extending through the lower lip, over the chin, to the hyoid bone in the median line. Through this wound the middle portion of the jaw-bone with the submental tumour and the tongue containing the tumour was removed, after all the attachments had been separated by means of curved scissors. The patient died on the fourth day in consequence of extension of inflammatory mischief from the trachea to the lungs. The third case was one of a large tumour confined entirely to the root of the tongue, which was removed by Kocher's operation. This growth had to be dissected away from the hyoid bone and the epiglottis, to both of which it was closely adherent. Preliminary tracheotomy was performed, and Trendelenburg's tampon cannula inserted. The patient, a man aged 66, made an excellent recovery, and was discharged on the twenty-second day. Dr. Bernays thinks that of all procedures for the total extirpation of the tongue, or even more extensive removals, Kocher's operation is decidedly the most appropriate. The first patient was living and doing well six months after the operation: in the third case there was a very short interval between the removal of the tongue and the publication of this paper.

464. *Nicaise on the Treatment of Hydrocele by Dissection and Excision of the Tunica Vaginalis.*—In 1886, Dr. Nicaise, of the Laennec Hospital, Paris, insisted in the *Revue de Chirurgie* on the advantage of dissecting away the peritoneal sac from the fibrous tissue of the scrotum in operations for the radical cure of inguinal hernia. This surgeon now advocates (*Revue de Chirurgie*, No. 2, 1888) a similar practice, in certain cases, in the treatment of hydrocele of the tunica vaginalis. This membrane, like a hernial sac, is bound to the internal surface of the fibrous coat of the scrotum; only this relation of the tunica vaginalis to the fibrous coat is normal, whilst that of the hernial sac is pathological. In ordinary cases of hydrocele the union between the two membranes would probably be found too intimate to permit of any separation by dissection, but the fibrous layer of the scrotum or rather the cellulo-fibrous substratum which envelopes the tunica vaginalis and the cord may undergo certain changes in hydrocele as well as in hernia, and may increase in thickness and become more vascular. After reference to Von Volkmann's method of treating hydrocele by incision, and to Julliard's method of partial, and Von Bergmann's of complete excision of the parietal portion of the tunica vaginalis, Dr. Nicaise reports a case of vaginal hydrocele on the right side with thickened coat and a free body in its sac, which he treated successfully by dissection and partial excision of the tunica vaginalis. An incision having been made on the front of the scrotum, the different layers were cut through as far as the interior of the sac which contained clear lemon-coloured fluid. The serous tunic was found to be thickened and very vascular, and presented on its inner surface several hard and resistant pale patches which resembled cartilage. There was found at the bottom of the sac a small loose body of rounded form, firm and of fibrous structure, and of the size of a pea. The tunica vaginalis could be readily separated from the fibrous layer by traction and digital pressure and without any use of the knife. After the membrane had been detached, almost as far as the epididymis, partial excision was practised, enough being left to cover the testis. The cut edges of the tunica vaginalis were then brought together by deep sutures, whilst the edges of the divided fibrous coat were taken up in the superficial skin-sutures. The result of this operation, it is stated, has been excellent. In this method, which Nicaise thinks might be practised with benefit in a certain class of cases, there need not, he asserts, be any fear of hæmorrhage, or of infiltration of blood into the cellular tissue. The denuded fibrous layer forms after this operation, as after an operation for the radical cure of hernia, a firm swelling in the scrotum, which, however, speedily disappears.

465. *Thiriar on the Means of Determining the Number and Condition of the Kidneys in Cases of Proposed Nephrectomy.*—In the course of an interesting memoir on surgical affections of the kidney and nephrectomy (*Revue de Chirurgie*, Nos. 1 and 2, 1888), Dr. Thiriar, of Brussels, points out that before operating in a case of surgical disease of the kidney it is necessary for the surgeon to assure himself not only of the presence of two organs, but also of the condition of the organ which is supposed to be sound. Of the different methods that have been proposed to attain this object, not one can be regarded as satisfactory, and it is only by direct observation—that is to say, by laparotomy—that the surgeon is really and constantly able to make sure of the presence of two kidneys and of their condition. Explorations of the renal region by the hand introduced into the rectum is hardly possible, and certainly the attempt is dangerous. Of the many other methods that have been proposed, those of Simon and Pawlick are considered to be the best; but both of these are very difficult in practice, and are applicable only to women. By attentive examination of the patient it is occasionally possible, Thiriar states, to determine whether one or both kidneys are present, and in the latter case to make out the condition with regard to health or disease of both organs. The results of examination of the urine and the absence or presence of renal 'ballottement' are valuable elements in such inquiry. The least enlargement of the kidney would give rise to the phenomenon of 'ballottement,' and what surgical affection of this organ is there, it is asked, that does not give rise to swelling? Changes in the character of the urine may also furnish much information. A kidney so far diseased as to need removal must secrete urine that is altered in character and mixed with pus, blood, or gravel. Often for some reason or other, either because it has ceased to secrete or the secretion has been retained, the evacuated urine has

a normal appearance, and therefore proves that the patient has two kidneys, one of which is sound.

466. *Richardson and others on the Surgical Treatment of Inflammation and Abscess in the Region of the Cæcum.*—A considerable portion of the *Boston Medical and Surgical Journal* of Jan. 24, 1888, is devoted to the subject of the surgical treatment of typhlitis and perityphlitic abscess, and presents a full report of three important papers, together with the discussions to which these gave rise, which were read by Dr. Richardson and other surgeons at a meeting of the Surgical Section of the Suffolk (U.S.) District of the Medical Society on Dec. 7, 1887. These papers, of which brief abstracts are given, will be found of great value and interest, and, together with a paper on the Treatment of Relapsing Typhlitis, read by Mr. Treves at a recent meeting of the Royal Medical and Chirurgical Society, and one by Dr. Gaston on Perforation of the Appendix Vermiformis (*Journal of the American Medical Association*, No. 9, 1887), give the latest results of the clinical research that has been made in this branch of abdominal surgery. Dr. M. H. Richardson, of the Massachusetts General Hospital, in his paper on the Treatment of Inflammations in the Region of the Ilio-Cæcal Valve, reports several cases to support some conclusions on the proper management of the two following classes of these affections: — *a.* Mild cases, in which the disease is mild, though acute, and presents the usual physical signs—namely, dulness and tenderness in the right iliac region, and recovery follows without the formation of abscess; this class also includes cases which run a mild course, and terminate in an abscess in the right iliac fossa shut off from the general peritoneal cavity. *b.* Severe cases, those which run a violent course in which a general peritonitis follows a perforation of the appendix or cæcum without the formation of abscess, and those in which the violence of the symptoms is due to abscess involving more or less the general abdominal cavity, and which may or may not be detected by physical examination. The following are the general conclusions as to treatment:—1. In mild cases of inflammation in the region of the appendix there should be no surgical interference till physical examination reveals the presence of an abscess, which should be incised by the post-peritoneal method. 2. In violent cases, in which it is evident that there is general peritonitis, laparotomy should be performed immediately. 3. In violent cases in which it is doubtful whether the general peritoneal cavity has yet been invaded, and in which the history and the results of the physical examination indicate the presence of an abscess in the ilio-cæcal region, though it be found impossible to locate the exact seat of the inflammatory process, an exploratory incision should first be made in the right iliac fossa, and the ilio-cæcal region be explored by the post-peritoneal operation. 4. The best incision to reach the appendix in an average case is one made along the outer border of the rectus, about 4½ inches from the spine of the pubes. 5. The best incision for extra-peritoneal exploration is one parallel and close to Poupart's ligament, beginning just above the middle, and extending outwards. Dr. Richardson has been convinced by the results of dissections on twenty-six subjects that the best place to open the abdomen with the object of exposing the appendix vermiformis is the left linea semilunaris, about four inches above the pubic spine. Through a small incision made in this situation the appendix can be grasped with two fingers and brought to the surface, provided there are no adhesions and no extreme distension of the abdomen. This latter condition, however, it is acknowledged, exists in just those cases in which it is necessary to remove the appendix. If the appendix be bound down by inflammatory adhesions, or by a firm and short peritoneal investment, Dr. Richardson asserts that this incision will be found preferable to any other. At the same meeting Dr. E. H. Bradford, who advocated similar treatment, reported four cases of inflammation in the neighbourhood of the cæcum, and Dr. J. W. Elliot brought forward a successful case in his own practice of laparotomy and abdominal drainage for perforation of the vermiform appendix that had caused intra-peritoneal abscess and peritonitis.

467. *Wenzel on Gritti's Amputation.*—In the *Berliner klinische Wochensch.*, No. 3, 1888, Dr. Karl Wenzel, of Bonn, advocates the claims of Gritti's amputation at the knee, and reports nine cases in which this operation was performed by Professor Trendelenburg with good results. The amputation as performed at Bonn consists in the four following stages. 1. Formation of the anterior flap by a curved skin incision, running with its convexity downwards from one condyle of the femur to the other, and with its middle corresponding to the tuberosity of the tibia. The anterior part of the articular capsule and the ligamentum patellæ are incised a few millimètres above the skin-incision. 2. A semicircular incision is then made through the skin in the popliteal space on a level with the base of the anterior flap, which may now be dissected upwards. When this has been done, an incision is made through the soft parts of the popliteal space down to the bone. 3. The femur is sawn across about one inch above the margin of the articular surfaces of the condyles. 4. The articular surface of the patella is removed by the saw. This last stage of the operation is generally regarded as a very difficult one; and, indeed, this difficulty in sawing across the patella is the chief reason why Gritti's operation has failed to obtain the support it merits. Trendelenburg, when the anterior flap has been turned upwards, presses his left thumb against the upper margin of the bone, and then elevates it forcibly from its bed, with his four fingers applied to the lower margin. Whilst an assistant keeps the flap in position, the articular surface is removed by a narrow saw. This having been done, the surgeon should see whether he can bring the sawn surfaces of the femur and patella into contact without any tension of the soft parts. This is a very important point, for on primary union of these two surfaces depends the success of Gritti's operation. In Wenzel's opinion it is unnecessary to fix the patella to the femur by wire or by ivory pegs. The chief advantage of this amputation is the fact that there is no wound under the skin covering the end of the stump. The patella and the femur become one bone, the extremity of which is not likely to atrophy or to become pointed. The surface of the patella, which constitutes the point of support, is covered by its normal layer of well-nourished skin. In Trendelenburg's practice the functional results of Gritti's amputation have been very good. In many cases the weight of the body could be borne on the end of the stump, a very decided advantage if one bears in mind the constant complaint by the subjects of other methods of amputation through the thigh, of the pain and

uneasiness experienced when the tuberosity of the ischium is the point of support. This operation, Wenzel holds, is useful in all forms of injury and disease necessitating removal of the leg, and is not contra-indicated in cases in gun-shot wound of the knee, even when such injury is associated with fracture of the lower end of the femur. A good result may be attained even though the anterior flap be too short either from want of skin at the time of the operation, or as a result of subsequent sloughing. So long as the anterior surface of the patella is covered by sound skin a good result may be hoped for.

468. *Browne on the After-treatment in Cases of Herniotomy.*—In a paper on strangulated hernia, read before the Ulster Medical Society, and published in the *Dublin Journal of Medical Science*, January 1888, Dr. J. Walton Browne, of Belfast, states that, after the relief of strangulated hernia by operation, he at once, as a matter of routine, puts the patient upon opium, and applies an ice-bag over the abdominal wall, suspended from a cradle, in close proximity to the inflamed intestine, the ice-bag and opium being continued so long as any tenderness is experienced upon pressure over the abdomen. Vomiting after the operation, if due to the anæsthetic, may be relieved by a cup of green tea. In cases of persistent vomiting not due to peritonitis, Dr. Browne has successfully applied liquor epispasticus over the course of the vagi nerves in the neck. In the treatment of troublesome hiccough the best results have been obtained from the hypodermic injection of pilocarpin. Allusion is made to a plan of treatment suggested by a colleague, Dr. Nelson. This plan, which is often practised in Vienna, consists in applying pressure to the roof of the mouth by the palmar surface of the thumb. The thumb is placed behind the incisor teeth, and firm pressure is kept up for five minutes at a time. Dr. Browne has had no experience of the treatment by salines of peritoneal inflammation occurring in cases of strangulated hernia, but has found such agents of much benefit in cases of peritonitis following ovariotomy. The bowels, it is held, should be acted on by the fifth day after the operation by enemata, especially in elderly or fat subjects. Dr. Browne has never seen any bad results from the early action of the bowels, but he states that in cases where the bowel at the time of operation is of a very dark colour the surgeon should hesitate in stimulating it to act.

469. *Burckhardt on the Treatment of Retro-Pharyngeal Abscess.*—In the *Centralbl. für Chirurgie*, No. 4, 1888, Dr. H. Burckhardt, of Stuttgart, holds that incision in the neck for opening a retro-pharyngeal abscess is preferable to one made by the mouth. The latter method, in cases of deep-seated abscess in young children, causing more or less dyspnœa, is difficult and not free from danger; the surgeon cannot apply a strictly antiseptic treatment nor place his patient under the influence of an anæsthetic, and often finds some difficulty in keeping his incision open. If the abscess be treated by the former method, its cavity can be explored by the finger. Dr. Burckhardt makes an incision along the inner edge of the sterno-mastoid muscle at the level of the larynx. The platysma and fascia having been divided, and the vessels that run to the upper part of the thyroid gland pushed outwards, a careful dissection is made with some blunt instrument through the loose cellular tissue of the neck as far as the inner side of the carotid artery, which at this level has no branch. If, now, at the bottom of the wound by the side of the larynx and the lower end of the pharynx a small opening be made with a knife into the condensed cellular tissue about the abscess, and this opening be dilated by small dressing forceps, a ready approach will be afforded to the retro-pharyngeal space. In some cases in the dissection beyond the platysma, a vein, sometimes large, sometimes small, may be found communicating with the thyroid vessels; this it is advisable to divide after application of a double ligature before proceeding with the dissection. It is thought probable that the prognosis in cases of the so-called idiopathic retro-pharyngeal abscess, the mortality of which is certainly not very great, might be rendered still more favourable if, at least in instances of deep-seated gatherings in young children causing much dyspnœa, a deep incision were made from the neck. Such an incision should be made, Dr. Burckhardt holds, in cases of spondylitic abscess, especially when there is urgent risk of suffocation or of perforation into the spinal canal. It is held also to be indicated in laying open retro-pharyngeal abscess of septic origin, as such incision alone permits continuous drainage, and best favours, if such treatment be needed, the injection of antiseptic fluids. At the conclusion of this paper three cases are reported in which the above-described operation was performed with good results in case of retro-pharyngeal abscess.

470. *Jacobs on Resection of the Femur for Ununited Fracture.*—The *New York Medical Record* of Jan. 14, 1888, contains the record of a case in which Dr. Jacobs, of Frostburg, U.S., performed with good results resection of the femur for ununited fracture. The patient, a man, aged 30, sustained on Feb. 1, 1887, a compound fracture of the lower third of the femur. On June 2, when there was found to be no union, the limb having been prepared in the usual way for an antiseptic operation, an incision, nine inches in length, was made on the outer aspect of the thigh, beginning at the knee-joint. The sharp end of the upper fragment, which had thrown out no callus, was found just under the integument, having perforated the vastus externus and crureus at the time of the injury. These muscles were divided, and by means of the chain-saw about one inch and three-quarters of the bone were removed, which allowed of its easy reduction. The lower fragment, which had been strongly flexed by the action of the gastrocnemius, and had thrown out some callus, after this had been pared off with a stout knife was drilled near its upper end with a surgical engine. A silver wire threaded through the hole served to elevate the bone into juxtaposition with the upper fragment, which was also drilled. The two fragments of bone were then firmly bound together. The superior articular artery was the only vessel that needed a ligature, but there was free oozing from the ends of the bone and from the surrounding tissues. Without waiting for the bleeding to stop, the wound was closed with superficial silk and deep catgut ligatures. There was much bleeding after the operation, and it was found necessary to apply clean dressings on the following day, but the wound was not exposed again until the sixth day, when it had healed perfectly throughout, without the formation of a single drop of pus. The final result was in every way satisfactory, and the patient at the time of the last report had a firm femur with about two inches

of shortening. In his remarks on this case, Dr. Jacobs believes that, notwithstanding the many bad results of resection of the femur for ununited fracture, if the operation be performed on a healthy subject in a strictly antiseptic manner, and if the bones be closely sutured, the wound cannot go wrong and the fragments must unite. With regard to the safety of closing so large a wound before oozing has stopped, Dr. Jacobs believes that if the wound be perfectly aseptic such a course is absolutely safe. It is held to be much better in an operation of this kind to cut off the ends of the wires and to leave the metallic sutures to become embedded in the callus, than to allow them to be left long with the ends brought out at the wound, and the latter to be kept open until the fragments of bone are firmly united.

471. *Adelmann on Splenectomy.*—The following conclusions are given in an editorial article in the *Medical News*, Jan. 28, 1888, on a recent paper by Adelmann, of Berlin, on splenectomy (*Archiv für klin. Chir.*, Band xxxvi., Heft 2) :—'This operation is indicated for floating spleen and cysts, and should positively be refrained from in any case of hypertrophy. The mortality of the operation is 95 per cent. in cases of leukæmic enlargement, 92·85 per cent. in cases of simple hypertrophy, and 100 per cent. in cases of malarial hypertrophy. Hæmorrhage was the cause of the fatal issue in 68·75 per cent. in the first two classes of cases ; and as this complication was almost as frequent in simple as in leukæmic enlargement, it is possible that leukæmia was present in some of the examples of the first condition. Indeed the so-called simple hypertrophy must so impair the hæmatogenetic functions of the spleen as to deprive the blood of its plasticity, and bring about a condition of hydræmia. Be this as it may, we take it that a simply enlarged spleen ought never to be excised. Should, however, this operation be thought of, it must not be undertaken without a careful preliminary examination of the blood, and, if resorted to, great care must be exercised in looking for and securing divided vessels, a point that had been neglected in one-half of the fatal cases from hæmorrhage.' W. Johnson Smith.

472. *Niehans on a Truss for Movable Kidney.*—Dr. Niehans, of Berne, agrees with Lindner that a carefully adjusted bandage will relieve the most prominent symptoms of movable kidney. Extirpation of the kidney is hardly justifiable, for not only is the operation itself dangerous, but the surgeon can never feel sure that the opposite kidney is healthy. [*See* Landau, *Movable Kidney in Women*, New Sydenham Society's Translation. He contends that the operation is quite unjustifiable, even when followed by good results. The immediate risk is great ; the opposite kidney may be diseased. In forty-eight cases of movable kidney out of a large series collected by Beumer there was only one kidney. One kidney may not always be sufficient to discharge the renal functions thoroughly. Lastly, a floating kidney never appears to cause fatal complications.—*Rep.*] Stitching the kidney to the parietes in the lumbar region, on Hahn's principle (nephrorrhaphy), has not been attended with encouraging results. Bandages and pads appear to be the only safe resource, but Lindner's pad held on by an abdominal binder is not always satisfactory. [Guéneau de Mussy's angular pad is also unsatisfactory. Landau recommends an 'artificial abdominal wall'—in fact, simply long stays reaching to the pubes and Poupart's ligaments—which removes what is, in his opinion, one of the fundamental causes of movable kidney.—*Rep.*] Dr. Niehans had under his care last August a woman, aged 23, who suffered from pallor, nausea, dyspepsia, and other reflex symptoms, due to a movable right kidney. He contrived an apparatus on the principle that its fixed point should be at the pelvis. To an ordinary double inguinal truss he fitted a steel spring, consisting of a vertical bar a few inches long, bent inwards at its upper extremity, where it fitted, by a ball-and-socket joint, into the back of a concave steel pad, oval, with its long axis horizontal. The spring could be adjusted to the truss in such a position as to allow the pad to lie over the right place in the abdomen. The pad, well lined with soft material, was held in place by an elastic waistband, which buttoned on to its right and left borders. This waistband was made light, and not too strongly elastic, lest it should pull up the truss. The patient being placed on her back, the pad was applied to the abdominal walls at the correct level, and the spring was made fast to the truss. The kidney was then pressed backwards, and the waistband was fastened. The apparatus was taken off at night. The patient was very pleased with the result. All her unpleasant symptoms disappeared, and she was recently in excellent health, able to do her housework. If she rose and began to dress before applying the truss the old pains returned, and lasted for about fifteen minutes, but steadily disappeared after it had been carefully put on.

Alban Doran.

473. *Lovett on a Method of Estimating Adduction and Abduction of the Leg in Hip-disease.*—This method consists in calculating mathematically the angle of deflection. The legs of the patient being placed in a straight line with the body, if one leg be fixed in adduction or abduction there will be lateral tilting of the pelvis. Real shortening can be measured from the anterior superior spine to the malleolus. Practical shortening from the umbilicus to a malleolus of each ankle. The line between the anterior superior spines will form two angles with the position it would occupy naturally by crossing the latter line diagonally. Either one of these two angles represents the angle of deflection of the leg on the diseased side. To estimate this angle in degrees Dr. Lovett has constructed a table. It will be seen that if the practical shortening is greater than the real shortening the diseased leg is adducted ; if less than the real shortening, it is abducted. Noble Smith.

474. *Orloff on Trephining the Temporal Bone in Thrombosis of the Transverse Sinus.*—In the *Vratch*, Nos. 4 and 5, 1888, Dr. Leonid V. Orloff, of St. Petersburg, describes a very instructive case of a woman, aged 27, who has been admitted to the Grand Duchess Elena's Clinical Hospital with left-sided purulent otorrhœa of seventeen years' standing, painful suppurative inflammation in the left mastoid region of three weeks' duration, violent headache, loss of appetite, weak and accelerated pulse, extreme prostration, apathy, drowsiness, and high fever (40°·7 C.), the symptoms remaining unrelieved, in spite of an incision over the mastoid process, which had been made by her former medical attendant shortly before her admission. A probe introduced into the wound met a bare, rough, osseous surface. The fact that the patient's extremely grave condition had been persisting, notwithstanding the opening

the abscess, pointed out significantly that, beyond a purulent mastoid periostitis, there existed some by far more serious complications, which were keeping up a poisoning of her organism by septic products. Central ostitis of the mastoid process (possibly accompanied by inflammation of cerebral sinuses or incipient meningitis) was diagnosed, and, accordingly, trephining the process, as the last resource, was proposed, accepted (by the patient and her relatives), and performed on the third day after her admission. No chloroform, only slight local etherisation, was resorted to, in view of the extremely bad state of the woman. A chisel was used for opening the mastoid antrum. No caries and no sequestra were found. On reaching deeper osseous layers, it became obvious that the mastoid process was sclerosed all through, and that the aim of the operation could not be attained. The operator (Dr. Tiling) was about to give up his work, when the last stroke of his chisel gave rise to a sudden appearance of a very offensive pus. An examination showed that the cranial cavity at the site of the transverse sinus had been accidentally opened. The opening was then cautiously enlarged by means of bone-forceps, and 'a dirty-greyish, caseous, distinctly pulsating mass' presented itself. The purulent cavity was washed out with a sublimate corrosive solution, powdered with iodoform, and plugged with iodoform gauze. The removed portion of the temporal bone measured ½ square centimètre; its inner surface was concave and slightly rough. The patient was very weak after the operation, but later on a gradual steady improvement ensued. On a close examination of the parts on the third day, the purulent cavity was found to have the shape of a comparatively narrow groove, measuring about 2 centimètres in length. There was observed a fairly profuse purulent discharge from the cranial gap for two weeks. The temperature returned to the standard about the nineteenth day. The patient was discharged on the forty-first day (by her own wish), a fistulous opening being still present. Within the first two or three weeks after her discharge there appeared twice a temporary paresis of the left facial nerve. About three months later, suppuration occurred over the mastoid process, but the abscess soon healed. About a year after the operation the patient was delivered at full term, her general state being at the time quite satisfactory. Dr. Orloff thinks that his case was that of inflammation of the transverse sinus, with thrombosis and consecutive septic disintegration of the plug, and a subdural abscess (resulting from the disintegration). The anatomical relations of the intracranial abscess, its oblong form and characteristic course, a grooved conformation of the inner surface of the bone removed, absence of any respiratory movements in the part exposed (which movements ought to be seen, if the transverse sinus were normal), all these details seem to testify in favour of Dr. Orloff's supposition and to repudiate the other alternative of the doubtful diagnosis (that of an external pachymeningitis with a simple subdural abscess, without any lesion of the transverse sinus). Whether the writer's diagnosis be correct or not, there can be no doubt whatever that his case belonged to the category of the 'absolutely hopeless,' and that the patient's recovery must be attributed solely to a purely accidental opening of the cranial cavity and abscess. Heinecke, Schwartze, Zaufal, and Krauss old have recommended (on theoretical grounds) an energetic surgical interference in cases of septic thrombosis of the transverse sinus (namely, to open the cranial cavity, remove the plug, and disinfect the sinus, in order to prevent or cut short septicæmia or pyæmia). Pointing to his case (which is, probably, unique in international literature), Dr. Orloff agrees with the distinguished German surgeons just named in their opinion, and expresses his hope that in such cases 'where the complications under consideration can be diagnosed at an early period, and where there are present favourable anatomical conditions, the surgical interference (as in the case sketched above) will lead, at all events, to a better issue than can be obtained by the usual expectant treatment by quinine and wine.'

475. *Levï on Two Cases of Trephining for Compound Fracture of the Skull.*—At a meeting of the Novgorod Medical Society, Dr. Grigory L. Levï, of the Zemsky Hospital, read a paper (*Proceedings of the Novgorod Medical Society*, 1887, p. 9) on the following two cases, presenting some point of practical interest. 1. A peasant, aged 28, of drinking habits, was admitted with a compound fracture of the left parietal bone, the injury having been inflicted with a hammer during a fight on the previous day. Hæmorrhage, he said, had not been considerable. On examination, there was found a gaping wound of the scalp, exposing the parietal bone, with a triangular depressed fracture measuring about one inch, along each edge. The man was listless and complained of headache, the pulse being slow, the morning temperature 38° C., the evening one 40° C. For about ten days his state remained pretty much the same, but on the eleventh day there suddenly appeared 'right hemiplegia, with impaired movements of the tongue.' On the twelfth, trephining (after Roser's method) was performed. Several hours later aphasia and general convulsions supervened, to be soon followed by symptoms of pyæmia. On the twenty-fifth day (after the accident) he died. The necropsy revealed meningo-encephalitis, with an abscess in the left hemisphere. 2. A soldier's son, aged 21, of moderate build and nutrition, when unloading his gun, charged with shot, was hit on the forehead by one of three fragments into which the weapon had burst in his hands. When first seen (on the fifth day after the accident), he complained of giddiness and headache, his pulse being slow, but the pupils normal. Somewhat above the left superciliary arc there was present a cutaneous wound about 1 centimètre in diameter, with contused edges, through which a comminuted fracture could be felt both by a finger and a probe. The wound was enlarged without delay, the dura mater presenting itself in the hole in the skull. The membrane was found to contain an opening, through which all the bony fragments had penetrated into the brain-substance. The dura was incised, and as many as twenty fragments were extracted from the brain by means of forceps. The wound was left open; no sutures were used. It rapidly healed up without any suppuration or fever. The patient left the hospital quite well on the eighteenth day after the accident. He was still in good health six months later. Dr. Levï concludes his paper with the following general propositions concerning the cases like the two above:—1. In the present state of surgical practice, with its fully reliable antiseptic resources, the removal of fragments or trephining must be performed as early as possible. [The author regrets that in his first case he postponed the sur-

gical interference to a late period.] 2. Under strict antiseptic precautions, an incision of the dura mater and brain itself for extracting the fragments embedded therein, to say the least, does not make the prognosis worse in any degree. 3. It is better to leave the wound open (for the sake of a thorough inspection after the operation). 4. Lesions of the skull and brain in the frontal region most decidedly justify a more hopeful prognosis than those in the parietal and occipital regions. 5. Purulent encephalitis (as in the first case) should be attributed to the agency of some pathogenic microbes (sometimes introduced, possibly, on rendering the first aid to the injured). In the course of a long discussion which took place in connection with Dr. Levï's communication, Dr. Vladimïr F. Bystroff objected to the proposition that cerebral abscesses were caused always by microbes penetrating from the outer world, since there were known cases of traumatic suppuration of the brain-substance in absence of any injury to the scalp and skull. The following case of his own, Dr. Bystroff says, strongly testifies against the mycotic theory of cerebral abscesses. A soldier was admitted to hospital on account of a violent headache. A careful examination failed to detect any lesions. About two days after his admission there appeared dilatation of the pupils, one of which became at the same time larger than the other. Loss of consciousness and convulsions soon supervened. The temperature, however, never rose above 37°·5 C. On the seventh day the man died. At the *post mortem* examination, instead of a cerebral gumma or any tumour, the existence of which was suspected, in absence of fever or any outward traces of a traumatic lesion, there were found in the brain four abscesses, one of which was as large as a hen's egg, another of the size of a walnut, and the others somewhat smaller. All the other organs were normal. A subsequent inquiry elicited the fact that about two months before the man's admission he had been struck on the head by the heavy shaft of a large country cart. V. Idelson, M.D.

476. *Harrison on the Possibility and Utility of Washing out the Pelvis of the Kidney aud Ureters through the Bladder.*—In the *Lancet*, March 1888, p. 463, Mr. Reginald Harrison alludes to the possibility of distending the ureters with fluid, and thus reaching the pelvis of the kidney. In the normal condition of the parts such a process could only be brought about by very gradual means, as the mode in which the ureters enter the bladder tends to prevent the regurgitation of fluids from the latter to the kidney. In cases of long-standing stricture and prostatic obstruction, this provision is gradually destroyed until the ureters and pelvis of the kidney become little else than subsidiary bladders. Taking these cases into consideration, Mr. Harrison resolved to try fluid distension of the ureter in the case of a middle-aged man who was suffering from acute renal pain and hæmaturia. After washing out the bladder, the author filled it with tepid water, and exercised pressure on it by means of the evacuator used in lithotrity. Whilst this was being done the patient made the observation, 'I feel something moving in my back.' On examining the aspirator it was found to contain about half a teaspoonful of fragments of phosphates and urates in small pieces. This process was repeated in a fortnight with similar results, and in another instance this same method of procedure was followed by the removal of about a teaspoonful of fragments of urate stone. When one considers that most urate stones are usually formed in the kidney, and grow as it were by reason of their being accidentally trapped in the bladder, the earliest possible opportunity should be taken to secure their discharge from the bladder. This plan may also be found useful in facilitating the discharge of inflammatory products from the kidney, and as a means of direct medication in certain cases of hæmaturia.

477. *Ferrier on a Case of Cerebral Abscess.*—In the *Brit. Med. Jour.*, March 1888, p. 530, Dr. Ferrier contributes the notes of a case of cerebral abscess in connection with disease of the middle ear, which was successfully treated by operation. The patient was an artisan, aged 47, who noticed a discharge from his left ear about Nov. 15, 1887; on the 25th he was seen by Dr. Coffin, who ordered the ear to be syringed with weak Condy's fluid; the patient seemed drowsy, the pulse was 52, weak and intermittent, the respirations 14, laboured and sighing. The temperature was normal. For two or three days he improved, but on Dec. 1 and 2 he seemed more drowsy, and early on the 3rd became delirious. On the 6th Dr. Coffin noticed that the speech was affected, and that he could not say the right words when he wanted to speak. On the evening of the 8th he was seen by Dr. Ferrier, who suggested his removal to the hospital as the case was clearly one of abscess of the brain, the position of which could be fairly indicated. Next day, when seen by the author, there were signs of slight muscular weakness on the right side, and by the ophthalmoscope the existence of well-marked optic neuritis was detected. Though the patient complained of no pain, a painful spot, tender to pressure and percussion, was detected about two inches above, and just anterior to, a line drawn upwards from the external auditory meatus. This spot corresponded to the anterior third of the temporo-sphenoidal lobe, and abutting or pressing on the fissure of Sylvius. The symptoms pointed to a lesion in proximity to the speech and auditory centres of the left hemisphere, and corresponded to the tender spot on the surface. It was decided to trephine, and on Dec. 10 Mr. Horsley operated. On removing the dura mater, the brain was seen to bulge exactly in the region of the wound, and on puncturing with a trocar, about five drachms of inodorous pus welled through the cannula. Four days after the operation the optic neuritis had almost disappeared, and on Jan. 3 the wound was quite cicatrised; the patient soon left the hospital quite well. The condition of the ears on leaving was as follows:—Hearing, right, $\frac{30}{100}$, left, $\frac{20}{100}$. Process conduction was normal, indicating mischief confined to the middle ear. No perforation could be detected in the membrana tympani, but it was thickened, cuticular in appearance, and purely granular. There was a slight opacity, behind the handle of the malleus, and rather above the centre of the membrane. Dr. Ferrier draws attention to the fact that in this case the temperature was always normal: this does not exclude the presence of encephalitis resulting in abscess, for many cases of cerebral abscess appear to run their course without any rise of temperature, and in some cases it is often below normal.

478. *Gardner on a Telephonic Bullet-probe.*—In the *Med. Press*, March 1888, p. 269, an article refers to a new bullet-probe, invented by Dr. Gardner, of New York. The instrument consists of a vulcanite frame adapted to the ear, and secured by

a spring band encircling the head. In this frame is fixed a thin vibrating tympanum-disc at a short distance from which a bar of soft iron is fixed, the latter being surrounded by a coil of wire, the terminals of which communicate directly with insulated wires about four feet long. One of these ends in a steel cone, which may be held in the mouth or hand of the patient, while the other terminates in a fine steel wire or other probe, which may either be plunged into the body in search of bullets where suspected to be present, or introduced into sinuses or other openings. Immediately it comes into contact with a metallic body, the current is completed, and a distinct 'click' is apparent to the operator armed with the telephone.

479. *Southam on a Case of Epithelioma of Penis and Scrotum.*—In the *Med. Chronicle*, March 1888, p. 494, Mr. Southam, M.B., records the case of a man, aged 55 years, who was admitted into the hospital in June 1881, suffering from marked epithelioma of the penis. Amputation was performed, and the patient left the hospital at the end of the month with the wound not quite healed. Two months later he returned with a recurrence of the ulceration, which presented all the appearance of epithelioma. In August 1881 the stump of the penis, and almost the whole of the scrotum, including the testicles, were removed by two elliptical incisions carried wide of the disease. The urethra and corpus spongiosum, which had been divided far back, were dissected out, turned downwards, and attached by sutures to the skin at the lower end of the wound. The patient made a good recovery, and was never seen again until September 1887, when he came to show he was alive and well. The perineal opening was large enough to admit a No. 10 catheter, and the urine was passed in a good stream. The successful result of the operation was due to the extensive removal of the parts, and to the non-infection of the lymphatic glands before the time of the operation.

480. *Owen on Rickety Deformities of the Lower Extremity.*—In the *Practitioner*, April 1888, p. 261, Mr. Edmund Owen contributes a paper on the Treatment of Rickety Deformities of the Lower Extremity by Operation. Many cases are no doubt cured by using such means as splints and elastic bands, but often, whilst trying to straighten the limb, the ligaments and muscles become so slackened and untrustworthy that the patient would have a far more serviceable limb if it be allowed to remain bent, whilst the muscles and ligaments were well developed. But between the gentle method of splints and the surgical procedure of osteotomy there is sometimes a medium course, and that is the forcible straightening of the limb under an anæsthetic. How this takes place no one can exactly say, as the author does not know of any case in which, after such an operation had been performed, an opportunity has occurred of inspecting the parts *post mortem*. In those cases of knock-knee where osteotomy is the only alternative, the author prefers making an incomplete section of the femur with a key-hole saw, and then completing the fracture by force, instead of using the osteotome and mallet. The area of operation being 'cleansed,' a longitudinal incision for three-quarters of an inch is made in the outer side of the thigh, a little above the condyle, clearing a passage for the narrow-bladed saw by a large raspatory, with which also an endeavour is made to raise the periosteum. Along this instrument the saw is slipped, the femur being then sawn about half or three-quarters of the way through. If both limbs require operation, the second is treated before the first is permanently dressed. They are then fixed straight in a box-splint or in a Bavarian dressing. For a leg bowed laterally, or possessing that antero-posterior and extreme curve so often found a little above the ankle in rickety children, osteotomy with the saw is easily performed. A direct incision is made down to the inner surface of the tibia, and the bone is sawn about half way through, and then broken. Sometimes the tendon of Achilles will need dividing, and the fibula may have to be also broken through before the leg can be made straight.

481. *Black on the Treatment of Chronic Ulcers of the Leg.*—In the *Provincial Med. Jour.*, April 1888, p. 149, Dr. Gordon Black describes a very successful method of treating chronic ulcers of the leg. The essential part being based upon the system advocated by Baynton about one hundred years ago, and consists in strapping the whole width of the affected limb with pieces of adhesive plaster spread on calico, after which the leg is carefully covered with a roller bandage from toes to knee. Dr. Black's method is thus described. The patient's limb is carefully washed and dried; then a spray of sulphurous acid is freely applied to the affected parts; pieces of plaster long enough to pass round the limb and overlap about four inches are dipped into a very hot solution of carbolic acid (1 in 20), and are applied, commencing about three inches below the ulcer, and overlapping one another, until the sore is covered in and about three inches of healthy skin above it. By means of a towel all excessive moisture of the plaster is removed, and finally a cotton bandage is carefully and evenly adjusted from the toes to the knee. This dressing is kept on for a week, when the patient is told to return, and another one is put on. After two or three weeks, as a rule, the ulcer will be found to have healed. The author always makes his patients walk about and do their ordinary work whilst this dressing is on, as muscular exercise is an important aid to the circulation in the limb, and helps considerably towards a successful result. The most irritable ulcers may be thus treated, if care be used to avoid unequal compression; the most horny edges of 'callous' varieties soon soften down and disappear, and the cases requiring skin-grafting are very rare. When the ulcer is cured the patient should wear a bandage, or some such support for the leg, for a long time, and often for the remainder of life. RICHARD NEALE, M.D.

482. *Phélip on Cocaine in Lithotrity.*—Urethro-vesical injections of cocaine save the patient from pain and leave the operator the time to carry out the operation calmly and thoroughly. On one occasion the first attempt without cocaine could not be completed, and left the patient intensely prostrated. On five subsequent occasions 3 grammes of cocaine, dissolved in 40 grammes of water, was the quantity employed each time. The solution should be comfortably warm, and the patient was rolled over so as to ensure the contact of the solution with all parts of the bladder-walls. The operation could then be proceeded with with the greatest ease, and the bladder remained anæsthetised for about twenty minutes. It was noticed that, all other conditions remaining the same, the effect produced appeared to be less marked and less durable on the two last occasions, probably from some amount

of tolerance having been established. In employing the drug for this purpose it is recommended :— 1. To apportion the strength of the solution to the degree of vesical irritation, and, should a large dose be necessary, a weaker solution to be first injected to ensure that no idiosyncrasy nor special disposition to absorption exists. The strength can subsequently be increased as required. 2. After the injection, the patient should not be allowed to assume any other than the horizontal position, to avoid the risk of cerebral anæmia. 3. The patient should be closely watched for symptoms of intoxication, and the patient should be warned to notify any uncomfortable sensation that he may feel. The first signs of the toxic effects of cocaine are nausea, prostration, dizziness, and pallor, followed by slowing of the pulse, cold extremities, and, later, dilatation of the pupils. 4. Should any such symptoms present themselves, the bladder should at once be emptied, and preparations made to give a subcutaneous injection of ether and to combat the collapse. No untoward symptoms were ever observed in the case alluded to. ALFRED S. GUBB.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

483. BELL.—On Paralysis of Malarial Origin. (*Indian Med. Jour.*, December 1887, p. 341.)

484. VERNEUIL, DR.—On Idiopathic Tetanus. (*Union Médicale*, Feb. 16, 1888.)

485. BALLET, M. GILBERT.—On Tænial Epilepsy. (*France Médicale*, Feb. 21, 1888.)

486. JOFFROY, DR.—On a Case of Friedreich's Disease, (*Rev. Gén. de Clin. et de Thérap.*, March 1, 1888.)

483. *Bell on Paralysis of Malarial Origin.*—In the *Indian Med. Jour.*, December 1887, p. 341, Surgeon H. Bell describes two cases which have come under his care at Lahore. (1) A healthy young gunner, aged 26, with one year's service in India, had enjoyed good health until one morning he came to hospital, reeling and staggering, just as if he were under the influence of alcohol, but he had not been drinking. He was unable to stand without assistance, and it was noticed that there was a certain amount of aphasia present, but there was no confusion of words, and no difficulty in writing. No signs of facial paralysis, and the pupils were normal. When lying down in bed volitional movements of the lower limbs were perfect, clearly showing there was no motor paralysis ; sensation was also perfect. He remained in this condition for ten days, when the symptoms gradually disappeared, and he made a perfect recovery. The only drug given him was bromide of potassium, in twenty-grain doses, thrice a day. (2) A young non-commissioned officer, who had been a year in India, and had been very healthy, came to hospital one day, stating that he had had ague rather badly for the last six days, and that he was now unable to walk straight. On admission his state was as follows : Marked anæmia, pupils widely dilated, but equal and responding to light, aphasia more marked than in the preceding case ; no paralysis of any of the muscles of speech or deglutition. The gait was exactly similar to that in the first case, and, in the recumbent position, he had control over his limbs. He was still under treatment when the author wrote the article, and had only slightly improved ; he was taking bromide of potassium internally, and after a time he was treated with liq. strychniæ, and the inunction of the mercury biniodide at the back of the neck. As to the pathological conditions giving rise to the above symptoms, the author thinks they were due to a small hæmorrhage on the surface of the cerebellum, or else a small embolism in one of its vessels. As to the etiology, it seems probable that this may be one of the various forms in which malarial poison makes itself evident ; probably some rapid blood-change takes place, giving rise to marked anæmia, and rendering the walls of the blood-vessels liable to rupture, or to the formation of thrombi in the veins. RICHARD NEALE, M.D.

484. *Verneuil on Idiopathic Tetanus.*—Alluding to a past assertion of his own against the existence of the so-called idiopathic tetanus, M. Verneuil read the notes of a case which had come under his notice. The patient, 60 years of age, after exposure to cold and wet on Oct. 20, took cold, and suffered the following day from general discomfort, sore throat, ear-ache, and deafness in the right ear. At the same time facial paralysis on the left side was noticed. On Nov. 19 he complained of a difficulty in opening the mouth, with laboured respiration when lying on the back. During an attempt to examine the back of the mouth, a violent attack of trismus supervened, with suffocation and intense congestion of the face. The patient's condition improved in the course of a day or two, but if he lay on the back the spasms and difficulty of breathing promptly recurred. He had several severe attacks with opisthotonos subsequently, and death appeared imminent. Ultimately the contractions left the chest, and passed on to the abdominal parietes and thighs. Chloral and morphine were given continuously, and at the end of thirty days the patient had recovered. It is worthy of remark that on several occasions the saliva of the patient was stained with blood, and this authorised M. Verneuil to maintain that the case was in reality one of tetanus, secondary to some lesion of the mouth or throat, and not of the idiopathic variety.

485. *Ballet on Tænial Epilepsy.*—The patient was a girl, 11 years of age, who, without any previous history of epilepsy, had four epileptic attacks in five days. After the first two attacks it was discovered that she was suffering from ascarides, and when these were got rid of by means of vermifuge, the fits ceased. The patient had no more fits from that time forwards, and the case was looked upon as a typical example of what one may call tænial epilepsy. At 24 years of age she was nurse in a hospital, and had occasion to pass through the mortuary. A stupid practical joke by a fellow nurse, who had wrapped herself in a shroud, caused her severe fright, and this was followed in a few hours by a well-marked epileptic attack. Since that time the characteristic symptoms (vertigo and fits) have persisted. The case is an interesting one, because it shows how two very different forms of irritation gave rise to the same result. In this particular case it is extremely probable that the patient was throughout an epileptic *in posse*, and that the two determining causes were merely accidents in its evolution. It is extremely doubtful whether epilepsy can be induced, except where it exists in a latent condition, by worms or other exciting cause.

486. *Joffroy on a Case of Friedreich's Disease.*—There was no neurotic family history, but patient's

father and mother died of tuberculosis. The family consisted of five children, the eldest being healthy, the second (girl) died of tuberculosis at twenty-five years of age, having suffered from similar symptoms to those of her younger brother from the age of twelve. The third child had an atrophied leg and died young. The fourth was healthy, and the fifth was the patient brought before the *Société Médicale des Hôpitaux* by Dr. Joffroy. At ten years of age he began to be uncertain in his gait, and at fifteen the motor incoordination was very marked. Locomotion was hesitating and waddling, and the patient fell from time to time if not prevented. He reeled at once if he shut his eyes, and could not get about at all at night. There was no impairment of sensation in the lower extremities, the plantar reflexes were normal, but the patellar reflexes were abolished. Some incoordination was manifest in the upper extremities, though to a less degree. The vertebral column, slightly inclined forwards, presented marked skoliosis, with convexity to the right. On the right side there was softening, with atrophy of the deltoid, pectorales, trapezius and biceps muscles, with diminution of electrical reaction. The facial expression denoted stupidity, the eyelids were half closed, and the facial muscles contracted slowly and imperfectly. No nystagmus. Sight and hearing were enfeebled, and he suffers from vertigo, though without epileptiform attacks. The mind, such as it was, had remained clear, and smell was intact. No cardiac nor vesical trouble. ALFRED S. GUBB.

OPHTHALMOLOGY.

RECENT PAPERS.

487. COHN AND BOIS-REYMOND.—On Photography of the Eye. (*Centralbl. für prakt. Augenheilk.*, 1888.)

488. SEGUIN.—A Second Clinical Study of Hemianopsia. (*Journal of Nervous and Mental Diseases*, November–December 1887.)

489. TILLEY, Dr. R.—On Monocular Diplopia without Manifest Lesion of the Affected Eye. (*Journal of the American Med. Association*, 1888, p. 322.)

490. HERZOG, BENNO.—On the Value of Wolffberg's Apparatus for Estimating the Quantitative Colour-sense. *Inaug. Diss. Liedtke, Königsberg*, 1887.)

ART. 487. *Cohn and Bois-Reymond on Photography of the Eye.*—Although numerous attempts have been made, no one yet has succeeded in producing a useful photograph even of the iris, still less of the fundus oculi. The prolonged exposure that has been necessary has rendered it almost impossible to obtain perfect steadiness, and much of the comparatively small quantity of light reflected from the eye is lost when an attempt is made to pass it through a condensing lens. Another great obstacle has always been the corneal reflex. The authors in these two short papers point out that by a new method of instantaneous illumination it has been rendered possible to obtain a good photograph of the iris of the natural and of the fundus of the artificial eye (Perrin's), and Cohn expresses an opinion that with some slight modifications of the apparatus he will succeed in taking a photograph of the living fundus. We sincerely hope that he will not be disappointed, but should be sorry to form an opinion of its feasibility till we have seen it attempted. The light reflected from the fundus of the artificial eye is much greater than from the natural eye. We have ourselves succeeded in throwing an inverted image of the former upon a glass screen, but have always failed with the latter. At the same time the fact that an instantaneous photograph can be taken of the iris is of physiological importance, for it has afforded a means of ascertaining the condition of the pupil in the dark, which has, of course, never yet been possible. The duration of the exposure is so momentary that the iris is photographed before it has had time to contract. The illumination is obtained by the ignition of a small quantity of a mixture of magnesium with chlorate or nitrate of potash ; the illumination thus obtained is momentary, but very intense. Now that one of the most serious obstacles has been removed, it is to be hoped that some measure of success will attend the efforts to photograph the fundus.

488. *Seguin on a Second Clinical Study of Hemianopsia.*—We do not propose on the present occasion to review this contribution of Seguin's, which forms but one of an important series, but merely to call attention to a symptom which he has described in detail and named 'hemiopic pupillary inaction,' and which may prove to be of considerable diagnostic value. It has already, as long ago as 1883, been described by Wernicke, but does not appear to have excited much attention. It consists in the fact that light falling upon the blind portion of the retina does not excite pupillary contraction. The symptom may easily be overlooked unless precautions are taken ; because the retinal area, excitation of which fails to produce pupillary contraction, does not correspond accurately with the hemianopsic area, for the simple reason that it is impossible to avoid some diffusion of light, even when a condensed pencil is thrown into the eye. When, for instance, the boundary between the blind and seeing halves of the field is median as usual, light may excite pupillary contraction if thrown into the eye along a meridian making an angle of 30° with the visual axis, but beyond this the reaction may be absent. The symptom is of importance, because its presence indicates that the lesion causing the hemianopsia is a peripheral and not a cortical one. The three cases given in the paper appear to have been instances of lesions at the chiasma.

489. *Tilley on Monocular Diplopia without Manifest Lesion of the Affected Eye.*—It is not easy to see how monocular diplopia, apart from physical causes, is to be explained. Owing to this, and the fact that the symptom being purely subjective its reality cannot be tested, most authorities are sceptical as to its possibility, and the grounds for this belief are strengthened by the fact that in nearly all the recorded cases there has previously existed binocular diplopia. Still it would be extremely unwise to neglect any evidence bearing on the question. In none of the cases in which the attempt has been made has it been possible to produce three images by placing a prism with vertical base before the sound eye. The writer of this paper thinks that this is not a valid argument against the reality of the diplopia, but does not give his reasons. To us it appears to be of decided value as evidence, although it is, of course, not conclusive. Dr. Tilley's case is the following :—Girl, aged 9, suffering from severe infraorbital pain on left side, and this eye partially closed from action of orbicularis muscle, the pain was greatly aggravated by pressure over infraorbital foramen, and by all movements of the eye. There was no evident paresis of any ocular muscle, but

when looking up the left eye turned inwards. Media and fundus normal in each eye. Pupils normal, V. 6-18ths. Headache, which was said to come on every other day. On being asked if she saw double, she replied that she did 'with the left eye.' However the experiment was varied she always saw double with the left eye. If one, two, or three coins were placed before her she saw two, four, or six. When a probe was held vertically at a distance of 50 centimètres the extra image was displaced to the right 7·5 centimètres, but when held horizontally the extra image was above. The distance between the images did not alter when the object was moved in the same transverse plane, but the distance between them increased as the object was withdrawn. The patient was colour-blind ('completely red-blind'). She was examined several times in a period of three weeks; at the end of that time she had an attack of unconsciousness followed by convulsions which were said to have lasted four hours, and to have recurred a few hours later. A few days later she became delirious, and suffered from vomiting. Then suddenly all the cerebral symptoms disappeared, but the monocular diplopia persisted, the false image lying in the upper and nasal part being displaced upwards and inwards. A few weeks later abscesses formed in several parts of the body. She was seen once again after this, and the diplopia was still present. Several cases previously recorded are referred to (*Transactions Ophthalmological Society*, 1882). Dr. Tilley appears to attach some importance to Mr. Adams' first case, but we confess that we can come to no other conclusion than that evidently held by Mr. Adams, that the diplopia was entirely fictitious. Mr. Adams' other case was a child, and the details recorded, and probably known, are too few for the case to have any value. Dr. Ord in the same volume records two cases. The first is open to a very strong suspicion of partial malingering. It was that of a Frenchman, who was admitted into St. Thomas's Hospital, and stated that he had been drugged and robbed of a large sum of money. There was a contusion on the vertex, and he had hemitemesis, which continued for two days, gradually decreasing. He complained of numbness of left side, complete loss of power in left arm, and partial in the leg. Both external recti, especially the left, defective. Vision of left eye blurred, and a pen held before it was seen double. He had the ordinary homonymous diplopia due to the defect of the external rectus, but he also saw double with each eye singly, and with both open he saw 'two homonymous pairs of images.' Soon afterwards the vision failed first in the right and then in left eye, the amblyopia being accompanied by contraction of the visual fields, but being without ophthalmoscopic changes—in fact, resembling hysterical amblyopia. There were several other symptoms, for an account of which we must refer our readers to the full report. He improved and left. It was subsequently ascertained that he went to another hospital, and gave a totally different history, and did not mention his stay in St. Thomas's. The diplopia was not noted. Dr. Ord's second case was that of a boy, aged 13. Eight days before admission he had an epileptic fit, with convulsions of left face and arm; remained drowsy, with constant vomiting, four days. When seen, both external recti acted imperfectly. Later he was seen by Mr. Nettleship, who reported complete paralysis of left, and incomplete of right external rectus; ordinary binocular diplopia. Optic neuritis in both eyes. A few days later said he saw double with each eye separately. This was not, however, constant. It is not noted whether he saw four images with both eyes open. Some weeks later there was monocular diplopia with the right eye only. Without being very positive, Mr. Nettleship evidently inclines to the belief that the sensation of uniocular diplopia was in some way 'based on his experience of binocular sixth-nerve paralysis.' Thirteen months later he died in another hospital. A dense blood-clot measuring 2·5 in. by 1 in. was found in the position of the right lateral ventricle, the latter, as well as the parts at the base, being much displaced. At the same meeting as that at which the above case was read, Dr. Abercrombie recorded a somewhat similar case. A girl, aged 10 years and 10 months. Headache; occasional vomiting; gradual loss of power on right side; paralysis of right external rectus. There was the ordinary diplopia, and also diplopia with the right eye alone. Margins of both discs obscured. She became unconscious and died. An abscess was found in the right temporo-sphenoidal and occipital lobes. As far as we are aware, these are the only cases that have been recorded of monocular diplopia without lesion of the affected eye. It seems to us that it is an important point that in all there were or had been present the conditions for causing ordinary diplopia; may not the act of vision in such cases become linked with the memory of the sensation of diplopia? It is specially noted in Mr. Nettleship's case that the distance between the images increased on movements of the eye just as it would have done in the binocular diplopia.

490. *Herzog on the Value of Wolffberg's Apparatus for Estimating the Quantitative Colour-sense.*—In the LONDON MEDICAL RECORD, December 1887, we gave a full account of this test, and expressed an opinion that if the statements made by Dr. Wolffberg, and corroborated by Boehm, should stand the test of further experience, a most valuable addition would have been made to our methods of diagnosis. It is with great regret that we have to announce that this essential condition has not been fulfilled. It will be remembered that Dr. Wolffberg found that when vision was impaired, in consequence of a spherical error of refraction, colour-vision failed also in a definite ratio, which he believed he had ascertained. When, on the contrary, the vision was impaired from some cause unconnected with ametropia, the colour-vision failed more than the form-sense, while astigmatism had the reverse effect. The form-sense was tested by means of Snellen's types, the colour-sense by the distance at which coloured discs of a known size could be recognised. It was evident that if Dr. Wolffberg's premises were correct this test would afford what no other test does—a means, namely, of immediately determining whether a defect of vision were due to an error of refraction alone, or to some other cause. About a year after the publication of Wolffberg's paper, Dr. Boehm published the results of a very large number of examinations that he had made with this test, and his results appeared in most respects to coincide with those obtained by Wolffberg, and to lead to even more definite conclusions. Dr. Boehm has studied in Wolffberg's clinique, and his experiments were made, as we understand, on material obtained from that source, and at Dr. Wolffberg's instigation; although, therefore, Dr. Boehm could hardly be considered an entirely independent witness, it

seemed to us that a *primâ facie* case had been made out for an extensive trial of the method. We regret to say that the results that have so far been obtained, not only have failed to confirm the conclusions of the writers, but, in our opinion, prove that the test is utterly worthless for the purpose which it is intended to serve. These results have been obtained from two entirely independent sources. The writer of this review, as soon as he could obtain Dr. Wolffberg's apparatus, placed it in the hands of Mr. Stephenson, clinical assistant to the Westminster Ophthalmic Hospital and medical officer in charge of the ophthalmic cases in the infirmary of the Lambeth Industrial Schools. Mr. Stephenson had previously, and for a purpose quite unconnected with the present inquiry, ascertained the vision, refraction, and corrected vision of every inmate. The inquiry was entirely unprejudiced, for it was undertaken in the full belief that the test was of practical value, and Dr. Herzog's pamphlet was not received until Mr. Stephenson's results had been obtained. Both experimenters have arrived at conclusions which are in several respects identical. In the first place even patients who were fairly intelligent found it exceedingly difficult to fix the precise moment at which the discs became invisible; this was especially the case when the objects, as recommended by Wolffberg, were held first at a distance at which they were visible and gradually withdrawn, but the difficulty was not entirely removed when the opposite course was adopted. It was found that the majority of those whose vision was 6-6ths could not see the discs at 5·5 mètres, and that many saw the red and blue at different distances. Also in cases of spherical ametropia, whose vision could be raised to 6-6ths, the distances at which the discs were visible did not correspond with Wolffberg's table, and were not always the same with the same degree of defective vision. When ametropia was artificially produced by spherical lenses the results in Mr. Stephenson's cases did not correspond with Wolffberg's, but Herzog's corresponded approximately. Many persons saw the discs at distances which were greater than those given in the table. According to Wolffberg and Boehm these should have been astigmatic, but Herzog found that only 43 per cent. were so. Among astigmatic eyes Herzog found the colour-vision relatively high, but the preceding statement of course neutralised any diagnostic value that might be put upon this fact. Herzog also gives results which disprove that the power of seeing the discs at 5·5 mètres shows that the visual faculty is normal, and the eye healthy. His results obtained in diminished illumination closely corresponded with Wolffberg's, but he altogether refutes the assertion that this is at all analogous to impaired transparency of the media. It seems to us that these results, which are given in great detail by Dr. Herzog, prove that this test possesses in an extreme degree that element of uncertainty that is inseparable from all subjective methods, and that when definite and consistent results can be obtained they are often entirely opposed to the conclusions formulated by Dr. Wolffberg. That Dr. Boehm should have confirmed those conclusions is surprising, and we shall await with some interest a further description of the details of the examination, and of the precautions that were taken to prevent mistakes. We note that Dr. Boehm admits that with regard to one of his tables results which did not tally with Wolffberg's tables were omitted; it is implied that they were few in number, and were exceptional cases of high myopia. It would be interesting to know what the total number of such cases were, and the ratio they bore to the whole number examined; it would also be important to know whether the examiner's results were corroborated by any one who did not know what results were expected. In the face of the facts we have quoted it is impossible to avoid a suspicion that the patients must have been permitted to know what they were expected to see—a point which, in a purely subjective test, ought of course to be strictly guarded against. At any rate, no other way occurs to us in which these results could have been honestly arrived at.

W. ADAMS FROST.

MEDICINE.

RECENT PAPERS.

491. DELON, DR. ALBERT.—On a Case of Phthisis cured by Inhalations of Sulphurous Anhydride. (*Lyon Médical*, Feb. 1, 1888.)

492. DARIEX, DR.—On the Treatment of Phthisis by Means of Inhalations and Hypodermic Injections of Sulphurous Acid. (*Bull. Gén. de Thérap*, Feb. 29, 1888.)

493. BOUSSI, DR.—On a Case of Rheumatic Chorea cured by Antipyrin. (*France Médicale*, Feb. 2, 1888.)

494. GLÉNARD, DR.—On the Cold Bath Treatment of Typhoid Fever. (*Rev. Gén. de Clin. et de Thérap.*, March 15, 1888.)

495. PURDY, DR. CHARLES W.—On the Use of Saccharin in Diabetes. (*Jour. of the American Medical Association*, Feb. 25, 1888.)

496. RICHARDSON, DR.—On Hiccup as a Symptom in Acute Disease. (*Asclepiad*, February 1888, p. 43.)

497. COUPER.—The Treatment of Scarlet Fever. (*Glasgow Med. Jour.*, April 1888, p. 295.)

498. AGUIRRE.—Treatment of Cholera by Intravenous Injection of Artificial Serum. (*Revista Argentina de Ciencias Médicas*, February 1888.)

499. CONSEL.—Extensive Gangrene from Ergotism. (*Revista de Medicina y Chirúrgica Práctica*, Feb. 7, 1888.)

500. CAILLÉ.—On Prophylaxis in Diphtheria. (*New York Medical Record*, Feb. 18, 1888.)

501. TAMBURINI AND LADAME.—On the Hypnotic Treatment of Somnambulism. (*Archivio Italiano*, November 1887.)

ART. 491. *Delon on a Case of Phthisis cured by Inhalations of Sulphurous Anhydride.*—The patient was a man, 32 years of age, whose father died of pulmonary disease at 65. His wife also died of phthisis. Two months previously he caught cold and coughed incessantly. Subsequently he rapidly became emaciated and had profuse night-sweats. Rise of temperature at night. Appetite and digestion good. On examination, the right apex was found to be consolidated, with moist râles after coughing. He was treated by counter-irritants and subcutaneous injections of eucalyptol. His general health was also attended to. He did not improve, and by the end of February he expectorated large quantities of green, purulent material. His condition was grave in the extreme, a cavity having formed in the right apex, and sulphurous inhalations were resorted to as a last resort. Half a handful of flowers of sulphur was thrown on to a shovel of red hot cinders, and the patient inhaled the fumes until prevented by impending asphyxia. Each *séance* was followed by abundant expectoration of the purulent material. In the course of a fortnight signs of amelioration

manifested themselves. The inhalations were continued together with the general treatment. Three weeks later the patient was apparently cured. The cavity in the right apex had cicatrised, and his general condition was flourishing. He was enabled to resume his laborious employment as a navvy, and no recurrence had taken place down to December 1887.

492. *Dariex on the Treatment of Phthisis by Means of Inhalations and Hypodermic Injections of Sulphurous Acid.*—The remedy is not a new one, for Galen used to send consumptive patients to breathe the sulphurous atmosphere of volcanoes. More recently Dr. Auriol, of Bellegarde, noticed that tuberculous persons who worked in the sulphurous air of a rag factory seemed to improve, and this led him to try it on other patients. He began by burning sulphur in a closed room, the patient continuing the inhalation until a piece of moistened litmus paper changed colour. To lessen the irritation produced by the vapour he added benzoin and opium. In thirty patients suffering from pulmonary tuberculosis, the inoculation of whose sputa determined general tuberculosis in guinea-pigs, this method of treatment was followed by cicatrisation of cavities and permanent benefit. The same method applied to infected guinea-pigs arrested the generalisation of the process. The inhalations also appeared to cure chronic farcy, a disease which, in its pathology and course, resembles tuberculosis. Subsequently a specially designed lamp, burning bisulphide of carbon, was substituted for the empirical plan of burning sulphur. The lamp resembles an ordinary spirit lamp, and is placed in water, the latter being allowed to run in and take the place of the bisulphide as this is consumed. The acid may also be produced by means of specially devised candles, which, in addition to the central wick, are surrounded by a layer of paper, which serves the purpose of a circular wick. A large quantity of sulphurous acid may be obtained from these candles. Still another way of obtaining a continuous supply is by burning a current of sulphuretted hydrogen gas in a conveniently disposed apparatus. Experience is wanting to allow of definite affirmations as to the ultimate effects of this treatment, but it invariably relieves the cough by liquefying the expectoration, and so facilitating its expulsion. The general condition of the patients likewise improved, and the stethoscopic signs diminished in severity and extent. Under this treatment, moreover, the bacilli underwent a marked diminution in numbers, and, in some instances, disappeared altogether, *pari passu* with the general improvement.

493. *Boussi on a Case of Rheumatic Chorea cured by Antipyrin.*—The patient was a lad, 8 years of age, with slight febrile symptoms, sore throat, and headache. A rash was said to have been present, but had disappeared. Five days later an attack of articular rheumatism commenced by swelling of the left wrist. This was followed by pain and swelling of the shoulders, knees, &c., and an endocarditis, evidenced by a loud systolic murmur at the apex. He was treated with salicylate of sodium, and the attack lasted ten days. Well marked desquamation followed, confirming the suspicion of the earlier symptoms having been due to scarlatina. Some days later choreic movements were remarked, which soon became very violent. The child could neither stand, nor sit, nor speak. He was given 8-grain doses of antipyrin four times daily. His condition at once improved, and he was enabled to sleep and to stand erect. The choreic movements disappeared altogether after a week's treatment. No recurrence took place.

494. *Glénard on the Cold Bath Treatment of Typhoid Fever.*—M. Glénard declares that whenever the cold bath treatment has been employed in typhoid fever by the fourth day, the malady has had a favourable course. His plan consists in giving, every three hours, night and day, whenever the temperature exceeds 39° C., a bath lasting twenty minutes, at a temperature of from 18° to 20° C. Advanced age, epilepsy, and valvular affections of the heart, *inter alia*, are contra-indications. The cold acts as a stimulant to the circulation and lowers the temperature. It tends to prevent complications due to hypostasis and hyperpyrexia, and it assists in maintaining the tone and functions of organs not already damaged. The cold baths never gave rise to bronchitis, pneumonia, or other complications, but if the application of the method be postponed until after the first week, they may of course be already present, but in such case the gravity and importance will be less than they would be with any other treatment. In complicated cases it is best to begin with baths at 32° C., gradually cooled down in order to watch the effect on the brain and heart. Baths should not be given oftener than every three hours, and they should be associated with the administration of stimulants. If necessary, gentle friction may be employed during and after the bath.

495. *Purdy on the Use of Saccharin in Diabetes.*—Experience has shown that saccharin is perfectly innocuous, even when administered in sufficient quantity to equal in sweetening power three pounds of sugar daily. With a large experience in his own practice, he had not met with a single instance in which its palatability had been called in question. The best form for patients was the tablet, which contained a suitable admixture of alkali and admitted of convenient dosage. In addition to its flavouring properties, it possesses decided antiseptic qualities, equal to salicylic acid and thymol. On the other hand, saccharin exerts no action on ptyalin or pepsin, and does not appear to have any secondary action on the digestive secretions. It is eliminated by the kidneys, and imparts its antiseptic properties to the urine. In diabetic patients the necessary ingestion of a food mostly of a nitrogenous character often weakens the digestive power of the stomach, and causes flatulent dyspepsia. Saccharin tends to check all such abnormal fermentative changes, and preserves the food until the tardy flow of gastric juices reaches and digests the contents of the stomach, in much the same way as carbolic acid acts. It is not unreasonable, also, to anticipate that the antiseptic properties of saccharin may influence the tendency to fermentation in the blood of diabetic patients, which gives rise to multiple boils and anthrax, and Kussmaul's coma. ALFRED S. GUBB.

496. *Richardson on Hiccup as a Symptom in Acute Disease.*—In the *Asclepiad*, February 1888, p. 43, Dr. Richardson draws attention to the frequency with which one used to meet with hiccup in cases of acute disease. In pneumonia, peritonitis, typhoid, it was a very frequent and unfavourable sign, whilst in some other diseases equally acute, and equally dangerous, it was rarely seen. The author believes that indicates some special disturbance of the pneumogastric, and that its presence

invariably indicates serious gastric or pulmonary lesion if it be frequently recurrent or persistent. Dr. Richardson thinks that the reason why this symptom is not so often met with in the present day is because the large quantities of alcoholic stimulants, formerly administered in acute disease, are not employed so freely as they used to be. In many cases no doubt the hiccup was due to the excessive use of stimulants, which were given with an idea of curing a symptom, whereas all the time it only aggravated, if not originally exciting it.

497. *Couper on the Treatment of Scarlet Fever.*—In the *Glasgow Med. Jour.*, April 1888, p. 295, Dr. David Couper contributes some remarks on the treatment of scarlet fever. This disease is in the truest sense *the* fever which requires feeding, and the patients usually can be well fed unless the throat symptoms are severe. The simplest food is the best, such as milk, eggs, beef tea, mince meat, chicken tea, custards, oatmeal porridge, white fish, &c. The patient should have a limited meal every two hours, and nothing in between. As to the quantity of drink, there need be no stinting; as much as can be retained may be given, especially in cases where there is any tendency to kidney complication. Plain cold water, iced water, or water with cream of tartar, lime juice, white of egg, brandy, claret may be given, according to the taste of the patient. Regarding hygienic conditions, it is positively essential to insist on a well-ventilated, well-lit room, and an open bed. Having obtained this the author does not consider any particular line of medicinal treatment of much value, though he thinks the plan of giving small doses of carbolic acid has some good in it, as he presumes the disease is due to the presence of microzymes in the blood, which are destroyed by the acid. If complications arise they must be treated; for instance, if the temperature rises to 103° F. or more, sponging with tepid water should be resorted to, or cold compresses to the abdomen, as recommended by Trousseau, should be used. Throat symptoms are sometimes alleviated by very simple measures, such as gargles of warm milk, port wine, tincture of steel, carbolic acid, chlorate of potash. When any diphtheritic exudation is seen the throat should be painted with iodine, or carbolic acid in glycerine. Glandular enlargements sometimes require inunction of 15 per cent. oleate of mercury, but if there be any strumous tendency this treatment ought to be avoided. In cases of dropsy depending on nephritis, nothing is so good as free dry cupping the loins, and plenty of water to drink; the author considers cathartics too weakening. Dropsy may, however, be independent of renal mischief, and may depend on some fault of the blood or cardiac debility, when iron and digitalis are useful. Reference is made to the recent investigations of Drs. Jamieson and Edington on the etiology of this disease, but these questions are too extensive for discussion in so short a paper.

RICHARD NEALE, M.D.

498. *Aguirre on Intravenous Injection in Cholera.* A case in which intravenous injection of artificial serum, composed of 20 grammes of sulphate of soda and 10 grammes of sodium chloride to 2 litres of water, was successfully employed in the treatment of the algid stage of cholera is recorded by Dr. Francisco Aguirre of Santiago (*Revista Argentina de Ciencias Médicas*). Six hundred grammes were injected at intervals into the left saphena vein, with very prompt and marked improvement of all the symptoms; a 'resurrection,' in fact, from a state of profound collapse. Dr. Aguirre refers to other recorded cases of intravenous injections by Lorain, Dujardin-Beaumetz, Rouvier, and Hayem, and urges that the results justify a continuance of this method of treatment.

499. *Consel on Ergotism.*—A case of ergotism, producing gangrene of the right leg, necessitating amputation of the thigh in its lower third, is reported by Dr. Luciano Consel of Armatro in the *Revista de Med. y Chir. Práctica*, Feb. 7. The patient was 64 years of age, and in good health up to the time of the commencement of his attack. He then felt pain in the left little toe, with discoloration. The symptoms were aggravated month by month, until nine months later (when he first sought advice) there was present complete gangrene of the left foot and of the leg up to its lower third, with very slight constitutional disturbance. Two other cases of seemingly spontaneous gangrene of the extremities are also reported by Dr. Consel, but in all three the evidence of ergotism seems purely negative.

WALTER PYE.

500. *Caillé on Prophylaxis in Diphtheria.*—The author remarks that certain individuals, and even certain families, seem to have a special proneness to diphtheritic infection. Eight such cases came specially under his notice, each of whom had had several attacks of the disease. These were all enjoined to observe the following precautions: Carious teeth to be stopped or extracted, the mouth to be rinsed after each meal with, alternately, a solution of liquor sodæ chlorinatæ, 1 to 20, and a 4 per cent. solution of boric acid; the fluid also to be gargled and to be dropped into each nostril. The prophylactic treatment was continued for two years, with the exception of the period during which the patients were away from the city. Five of them had attacks of simple pharyngitis and tonsillitis, and three were exposed to diphtheritic infection from a member of their family, but not one of the eight persons experimented upon took the disease.

RALPH W. LEFTWICH, M.D.

501. *Tamburini and Ladame on the Hypnotic Treatment of Somnambulism.*—At the Congress of the Italian Medical Association at Pavia Dr. Augusto Tamburini communicated the case of a hysterical girl, 15 years old, affected with double consciousness. In the state of somnambulism her character changed for the worse. In her usual mental state she retained no remembrance of what she had done in the other condition, whereas in the second stage she remembered the events of her normal life. She was cured by being hypnotised—how it is not explained, but we suppose it was done by impressing upon her mind that she must in future resist such states of spontaneous somnambulism, as was done in the next case. M. Ladame, of Vienna (*Annales Médico-Psychologiques*, March 1888), gives at some length an account of a woman of twenty-seven who when a child passed into a state of somnambulism after getting a fright from a fire. Her father also had been troubled with attacks of somnambulism. In January 1887, being at Vienna, she nearly set fire to the house by knocking over a petroleum lamp. This caused her deep emotion, and she fell into a sleep which lasted two days and two nights. On her return to Geneva these attacks of profound sleep were renewed and she was observed to waken in what is called the second state—*i.e.* the condition of active somnambulism. In her ordinary mood she

was soft and amiable; in the second state she was impatient, mischievous, and impetuous, but active and diligent. She had a better appetite and better digestion. She was very impulsive, and bit her betrothed on the arm because he wished to prevent her leaving the house. In this state she went about, played on the piano, or disputed with her sister or her betrothed. When she was in the normal state she always lost at the game of draughts, but in the second state she always gained. Dr. Ladame being consulted hypnotised the young woman and suggested to her that she should sleep quietly all night without dreams or nightmare. He forbade her leaving her bed, and told her she would awake properly after having passed a quiet night. After this she slept well, but talked in her sleep. Dr. Ladame then again hypnotised her, and forbade her talking in her sleep. After repeating this process once more she was completely cured, and was able to work twelve hours a day at her trade as a seamstress.

W. W. Ireland, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

502. Koeberlé.—Removal of a Uterine Polypus of Large Dimensions. (*Gazette Médicale de Strasbourg*, April 1, 1888.)

503. Zucker, Dr. J.—Case of Early Rupture of a Tubal Gestation Sac. (*Centralbl. für Gynäk.*, No. 15, 1888.)

504. Chouppe, Dr.—On Antipyrine in Gynæcology. (*N. O. Med. and Surg. Jour.*, April 1888.)

505. Dudley, Dr. E. C.—On a Case of Vaginal Hysterectomy for Sarcoma of the Uterus. (*Obstet. Gaz.*, March 1888.)

506. Byford, Dr.—On a Case of Vaginal Hysterectomy. (*Obstetrical Gazette*, March 1888.)

507. Terrillon, M.—On Pregnancy complicated by Ovarian Cyst. (*Arch. de Tocologie*, April 1888.)

508. Mantel, Dr.—On the Pathogenesis of Hydramnios. (*Arch. de Tocologie*, April 1888.)

509. Pajot, Professor.—On Puerperal Eclampsia. (*Jour. des Sages-Femmes*, May 1, 1888.)

510. McKeough, Dr. G. T.—On the Induction of Premature Labour in the Albuminuria of Pregnancy. (*Canada Med. and Surg. Jour.*, March 1888.)

511. Barnes.—On Ovariotomy in Aged People. (*Provincial Med. Jour.*, April 1888, p. 153.)

512. Meredith.—On Menorrhagia and Hygienics. (*Bristol Med. Chir. Jour.*, March 1888, p. 17.)

Art. 502. *Koeberlé on the Removal of a Uterine Polypus of Large Dimensions.*—A single woman, aged 54, had not seen a period for several years. She had a mass of fibroid outgrowths, which gave her no trouble. Suddenly, irregular attacks of uterine hæmorrhage occurred. The vagina was very narrow, and as all the coagula could not escape, some remained and decomposed, causing an offensive odour. Hence cancer was diagnosed and palliatives administered. The bleeding ceased, and the patient regained her health. In June 1887 Professor Koeberlé examined the patient and found a gigantic polypus, which distended the vagina, presenting at the vulvar orifice. By careful introduction of a steel sound he discovered that the polypus sprang from a narrow pedicle, and pushed the uterus and its fibroid outgrowths above the pubes. There was an abundant purulent discharge, constipation, and difficulty in micturition. Professor Koeberlé proposed to twist the pedicle so as to induce sloughing of the polypus and subsequent extraction in fragments (*morcellement*), avoiding the danger of hæmorrhage. On June 18 he divided the perinæum as far as the anus, and seized the tumour with stout forceps. He rotated the polypus two turns, when he suddenly felt all resistance cease. No hæmorrhage ensued. He therefore extracted the tumour by cutting upwards spirally, on Hegar's principle—a difficult task, as the tissues were very tough. A flap like an apple-peel, nearly a foot in length, was thus cut away; the polypus was then sufficiently reduced in bulk for extraction, which was easily effected. It was a fibroma weighing 1 lb. 10 oz., but a great quantity of serum had drained away during the peeling process and the subsequent extraction. The pedicle was as thick 'as two fingers,' and sprang from the left side of the cervical canal close to the os externum. It had been very closely torn, only a few filamentous tags remaining, and these were twisted off. The purulent discharge came from deep fissures in the distended vagina. The parts were washed out with a 1 in 1,000 solution of sublimate mixed with carbolised water (strength not indicated), iodoform was applied to the raw surface, and the perinæum was sewn up. The temperature never exceeded 99°, the discharge disappeared and the patient was quite well at the end of three weeks. Professor Koeberlé has removed forty large polypi, either by ligature, or by progressive torsion when the ligature could not be applied. Avulsion is only to be performed, he thinks, in cases where the tumour is very small, for the hæmorrhage and the necessary plugging are both dangerous. In one case, the body of the uterus, inverted, was included in the ligature. In another, a large fibroid polypus was enucleated; it hardly protruded from the os and had a very broad base. The patient recovered and bore a child afterwards. All these cases recovered. Professor Koeberlé, in conclusion, described a case where a woman was reduced to extreme cachexia from a fœtid discharge and frequent hæmorrhages. He prescribed antiseptic injections, thinking that it was a case of cancer, for the vagina was filled with putrified organic fragments. A few days later the patient was delivered of a large polypus which had sloughed. She rapidly recovered. [Professor Koeberlé is evidently much afraid of hæmorrhage after the removal of a polypus. Dr. Matthews Duncan teaches his pupils to cut boldly through the pedicle, or, if necessary, to cut away wedges, or to make Hegar's spiral flap. 'It is now known that bleeding after the operation very rarely occurs. I have once seen it after the removal of a fibroid, and the number that has passed through my hands is great. I have seen it after the removal of a glandular polypus, and after the removal of a fibro-cellular polypus, but in no case was it very alarming, and it was arrested by a simple vaginal plug.' (Lecture 'On Polypus Uteri' in *Clinical Lectures on the Diseases of Women.*) Koeberlé's case, above described, was peculiarly suited for the spiral flap method of extraction.—*Rep.*]

503. *Zucker on Rupture of a Tubal Gestation Sac.*—Dr. J. Zucker, of Berlin, was called in on February 17, 1888, to an indigent woman, aged 32. She was suffering from severe pains in the loins and hypogastrium. She had borne two children, and had had one miscarriage; but the date of her last confinement was not stated. The last period was 'in December or in January.' On February 12

severe abdominal pains set in and lasted for two hours, passing off after purgation by drugs. The patient resumed work, but the pains returned on the 17th. The pulse was weak, the tongue dry. The abdominal walls were very tense, but an indistinctly circumscribed soft mass could be felt to the left of the cervix. The parts were very tender. Symptoms of severe intraperitoneal hæmorrhage set in during the night, and much time was lost in transferring her to Dr. Veit's wards. At 2 P.M. on February 18 Dr. Veit operated. The patient was pulseless, and slightly delirious. Even under chloroform no circumscribed tumour could be felt. On opening the peritoneum blood spurted out freely. Nearly four litres of fluid blood had to be rapidly cleared away. The left appendages were carefully explored but found normal, and the right fimbriæ floated freely in the peritoneal cavity. On prolonged scrutiny the bleeding was at last found to proceed from a rent, two inches long and three-fifths of an inch wide, at the junction of the inner and middle third of the right tube. Fortunately, in clearing away the mass of clots around the rent, an entire minute ovum was discovered. The tube was speedily ligatured on each side of the rent, and the pedicle encircled by a transfixing suture (*rings umnäht*). The abdominal wound was then closed, and about a litre of bloody fluid was left in the peritoneum, the operator hoping that it would be absorbed. A compress was applied to the abdomen, the patient rallied for awhile, but died rather suddenly twenty-one hours after the operation. The ovum was found to be perfectly fresh, and could not have exceeded the third week of its development. The tubal sac was 'at the most' not larger than a hazel-nut. No disease of the adjacent tubal mucous membrane could be found. The very early rupture and the profuse hæmorrhage from so small a rent were remarkable features in this case. Dr. Veit has operated in ten cases of tubal pregnancy. In three rupture had taken place, only one of these recovered; all the seven cases uncomplicated by rupture recovered. That abdominal section should be undertaken as speedily as possible when acute symptoms of intraperitoneal hæmorrhage occur after a distinct history of sudden cessation of the catamenia for two or more months, there can be little doubt. ALBAN DORAN.

504. *Chouppe on Antipyrine in Gynæcology.*—Continuing his researches on antipyrine, he calls attention to the good effects obtained with antipyrine in post-parturition pains and in dysmenorrhœa. He quotes the case of a woman, 35 years of age, who suffered from profuse hæmorrhage due to uterine fibromata. Ergot checked the loss, but gave rise to such severe pain that it could not be continued, and the hæmorrhage recurred. Rye ergot was again administered, with similar results. M. Chouppe then had recourse to antipyrine. Directly the pain began, after the ergot, two grammes of antipyrine were injected hypodermically, and in twenty minutes the pain had disappeared. The next time the antipyrine was given before the ergot, and no pain followed. He believes that it might be administered with advantage to women of an irritable temperament during parturition.

505. *Dudley on a Case of Hysterectomy for Sarcoma of the Uterus.*—The patient, a multipara, 62 years of age, had already submitted to two operations, resulting in the removal of masses of friable material, weighing several pounds, from the vagina, but as it recurred Dr. Dudley removed the whole uterus, *per vaginam*. Hæmorrhage was prevented entirely by means of pressure forceps, no sutures or ligatures being used. The cervix was stuffed and sutured in order to prevent the escape of its contents during removal, and was then drawn down to the vulva, and an incision made with scissors round the cervix at the utero-vaginal attachment. The structures were then torn away all round the uterus, great care being shown to avoid injury to the bladder. The broad ligaments were clamped and divided. The disease had invaded the right broad ligament, and forceps were applied further back, including the fallopian tube and ovary. Beyond an attack of depression on the fourth day the patient rapidly improved, and was able to leave her bed in a month. The operation took forty minutes, and had it not been for adhesions could have been done in twenty, with ease.

506. *Byford on a Case of Vaginal Hysterectomy.*—The patient, a virgin, 57 years of age, was suffering from a papillomatous growth springing from the posterior lip of the cervix. It was intended to curette the growth, but this proved to be impracticable. A circle of ligatures was made round the fornices, and a bloodless incision made within it. Clamps were applied to the broad ligaments, and the structure dissected away from the uterus, which was removed in its entirety without the loss of more than an ounce of blood. The patient made a rapid recovery. Having performed the operation with and without hæmostatic forceps, Dr. Byford is of opinion that ligatures are preferable in cases in which the size of the vagina and the mobility of the uterus allow of their application without too much loss of time. They may be left long, and used to draw the stump together over the vaginal opening. Where time is an element of importance the forceps are preferable. Ligature of the vaginal walls, before cutting, can be done so quickly and so easily that it is a desirable procedure in all cases.

507. *Terrillon on Pregnancy complicated by Ovarian Cyst.*—The co-existence of an ovarian cyst with pregnancy exposes the woman to numerous and pressing dangers. In such cases ovariotomy is generally preferable to puncture. Ablation of the cyst gives the best results when undertaken between the third and the fifth month of pregnancy. During the last three months it is preferable, except urgent symptoms supervene, to postpone the operation until after delivery. In the course of the operation it is desirable to avoid, as far as possible, all manipulation of the uterus, and if the organ should be accidentally wounded, certain cases seem to point to the advantage of incising, emptying, and suturing it. The ordinary precautions in the performance of laparotomy are desirable.

508. *Mantel on the Pathogenesis of Hydramnios.*—An indisputable and frequent coincidence exists between the insertion of the placenta on to the inferior segment of the uterus, and the presence of an excessive quantity of amniotic fluid. This coincidence appears to have escaped notice hitherto, owing to the difficulty of ascertaining the exact place of insertion of the placenta and of estimating the amount of fluid present. The pressure put on the placenta when inserted low down, and the modifications in the circulation which follow in the umbilical cord, appear to determine stasis and increased osmosis into the amniotic cavity. Abnormal implantation of the placenta will not account for every case

of hydramnios; acute hydramnios, for example, requires another explanation. Apart, however, from cases of syphilis and a certain category of fœtal monstrosities, it appears to have a large share in the production of an abnormal quantity of amniotic fluid.

509. *Pajot on Puerperal Eclampsia.*—Referring to a statement that he considered the nature of eclampsia to be a mystery, Professor Pajot maintains that though we are not in possession of all the facts bearing on the phenomena of eclampsia, yet that a great deal is known in reference thereto. His view ascribes eclampsia, not to the effect of albuminuria, but to a reflex action bearing on the cephalo-rachidian region which also gives birth to albuminuria. It is not a question of degree but of kind, in so far as the lesion is concerned. He bases his belief on the following grounds: 1, the supervention of convulsions bears no relation to the degree of albuminuria; 2, that women markedly albuminuric do not have eclampsia; 3, that women but slightly albuminuric (prior to any convulsions) die in coma; 4, that women, even without albuminuria, may die of eclampsia, though this is rare. He points out that although eclampsia is generally preceded or accompanied by albuminuria, not more than one in five of albuminuric women develop symptoms of eclampsia. Moreover, he asserts that even a single case of eclampsia without albuminuria would show that eclampsia was not solely dependent on the presence of albumen in the urine. He infers, therefore, that all one is justified in asserting, is that an albuminuric woman is predisposed to ulterior nervous lesions, to which a neighbouring lesion may give rise, but of a different character.

510. *McKeough on the Induction of Premature Labour in the Albuminuria of Pregnancy.*—In eleven cases of albuminuria during pregnancy nine mothers recovered and four children were born alive. In four cases in which temporising measures were instituted until labour came on, convulsions occurred in three, one mother died, and three recovered. In two cases in which labour was excited after convulsions had occurred, both children were born dead, and one mother died. In four cases in which labour was induced after a temporary trial of expectancy, but before convulsions took place, all the mothers made good recoveries, and the four children lived. With respect to the question as to when is the time for expectancy to cease and surgical measures to begin, he observes that the quantity of albumen in the urine is no sure guide to the extent of the toxæmia; in some of the most alarming cases, there being but slight traces of albumen. Generally speaking the nervous symptoms show themselves in inverse ratio to the dropsy, and it is surmised that the dropsical effusion forms a reservoir for some of the urea not excreted by the kidneys. Experience shows, however, that it is not safe to await the appearance of nervous symptoms before deciding as to the course to be pursued. It is better to act upon the various emunctories, eliminating as much of the poison as possible and by appropriate sedatives, to allay irritation. Should these measures fail, premature labour must be induced. Even in cases in which expectancy is carried out successfully as regards the mother, the danger to the child is very great. It was shown by Charpentier and Butte at the Washington Congress, that the child might be killed by direct intense intoxication, and his own cases bore out this view. He believes that interference is often delayed until the irritability of the nervous system is such as to render convulsions inevitable. As a matter of observation, spontaneous expulsion of the fœtus is common in puerperal albuminuria. In six cases of the series labour came on without assistance, two before and four after, convulsions. It would appear from this that we are only following in Nature's wake in resorting to surgical interference in these cases.

ALFRED S. GUBB.

511. *Barnes on Ovariotomy in Aged People.*—In the *Provincial Med. Jour.*, April 1888, p. 153, Dr. Fancourt Barnes records three cases of cystic disease of the ovary in women over sixty-five years of age. One of the patients was seventy, and had noticed the abdomen gradually increasing for the past eighteen months. Under an anæsthetic the author made an incision through the abdominal wall, and found an adherent cyst. On drawing out the tumour the uterus followed it, and being much atrophied great care was needed in detecting what was the uterus and what constituted the pedicle. This being done, the pedicle was transfixed and tied, and the abdomen closed. The patient did well, and was out of bed in five weeks. The only danger to be feared is the development of bed-sores, and the only way to obviate this is to allow the patient change of position from time to time. This plan the author also adopts in his operations on younger women, as he has seen bad results from the practice of keeping patients confined strictly to lying flat on their backs for five or six days after an operation.

512. *Meredith on Menorrhagia and Hygienics.*—In the *Bristol Med. Chir. Jour.*, March 1888, p. 17, Dr. John Meredith contributes an article on various cases of disordered menstruation. Whilst comparing the history of many of these cases, the author was struck with the great number in which he was able to trace defective sanitation in some form or other as the main cause; cases of uterine tumours or polypi being excluded. Many women were found to be peculiarly susceptible to sewer air, and similar effluvia, and when exposed to their influence they lose much at the monthly periods; not only did they suffer more at the time, but the intervals of freedom became shorter, causing the patients soon to appear sallow and anæmic. As yet there seems no indication for describing polluted water and foul air as causes of menorrhagia, although their influences are now and again in a dim sort of way admitted in cases of amenorrhœa. The treatment resorted to was first to remove the exciting cause, or by removing the patient. As to drugs, those usually recommended are useful, viz., cannabis indica, acidi nitr. mur. dil., chlorate of potash, ergot, tinct. hamamelis, terebene, &c. Two or more of these, in combination with glycerin, usually give good results for a time; immediately the flow ceases the medicines should be stopped, and iron and quinine given during the intervals.

RICHARD NEALE, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

513. GRIGG.—On a Mode of Obtaining Vaccine Lymph. (*Brit. Med. Jour.*, April 1888, p. 792.)

514. SMITH.—The Use of Acetanilid (Antifebrin) in Typhoid Fever. (*Glasgow Med. Jour.*, April 1888, p. 291.)

515. MARTIN.—On Iron in Acute Rheumatism. (*Med. Press and Circular*, April 1888, p. 375.)

516. DOUGALL.—On Saccharine. (*Glasgow Med. Jour.*, April 1888, p. 292.)

517. WHITE.—The Treatment of Epilepsy by Simulo. (*Lancet*, March 1888, p. 617.)

518. BOKENHAM.—On Some Therapeutic Uses of Antipyrin. (*Practitioner*, April 1888, p. 266.)

519. WHITLA.—The Treatment of Rectal Pain by Conium. (*Practitioner*, April 1888, p. 250.)

520. LANGGARD, A.—On the Most Recent Investigations of Ergot of Rye 'Ueber die neuesten Untersuchungen des Mutterkornes.' (*Berliner Pharmaceutische Zeitung*; *Der Fortschritt*, No. 2, Jan. 20, 1888; *Therapeutische Monatsschrift*, 1887, 442.)

521. KAST, PROFESSOR A. (Freiburg).—Sulphonal, a New Hypnotic. (*Berliner klin. Wochensch.*, April 16, 1888.)

522. BONMAISON, DR. L.—On Antipyrin as a Nervine Medicine. (*Montpellier Médical*, April 16, 1888.)

523. LERMUSCAN, DR.—On Creolin. (*Moniteur du Praticien*, March 25, 1888.)

524. ROLLET ,DR.—On Antipyrin as a Preventative of Sea Sickness. (*Lyon Médical*, April 29, 1888.)

525. LOYSEL, DR.—On Hypodermic Injections in Malarial Attacks.

526. WAGNER, DR. R.—On Hydro-electric Baths. (*Deutsche med. Zeitung.*)

ART. 513. *Grigg on a Mode of Obtaining Vaccine Lymph without Puncturing the Vesicles.*—In the *Brit. Med. Jour.*, April 1888, p. 792, Dr. Grigg describes a method of obtaining lymph without puncturing the vesicle, which does away with the chance of contamination with blood, and lessens the risk of subsequent inflammation. It is as follows: a small bead of pure glycerine is dropped upon the centre of each pock, then the top of each pock is rubbed with a smooth blunt instrument (the round glass head of a shawl-pin does excellently). After the lapse of two or three minutes the bead of glycerine will have increased to nearly double its size, especially if the vesicle contain a good supply of lymph. If necessary, a second drop of glycerine may be applied after the first has been used, and even a third. Another advantage in this plan is that it is not necessary to hold the infant's arm, and consequently it does not become troublesome and difficult to convey the lymph from one arm to another.

514. *Smith on the Use of Acetanilid (Antifebrin) in Typhoid Fever.*—In the *Glasgow Med. Jour.*, April 1888, p. 291, Dr. Caldwell Smith states that he does not agree with the reports given in the *Year Book of Treatment* on the value of antifebrin in the treatment of typhoid fever. The temperature is reduced without a doubt, and does not rise again if a small dose be repeated every six or eight hours. The one great feature that struck the author when he used this drug was the rapidity with which it relieved the distressing frontal headache; this seldom returns, and, if it does, it is not so severe. In children of 1 or 2 years with typhoid it may be given in doses of ½ a grain, which will cause a fall of two or three degrees in the temperature. After the first dose, if the temperature be reduced below 101° F., it is best not to repeat until the temperature reaches 102° F. As a rule, three or five grains is sufficient to lower the temperature without affecting the character of the pulse. It has a marvellous effect in soothing the patient, who often falls asleep for three or four hours and wakes up refreshed. Of course, the disease is not cut short in any way, but the comfort of the patient is materially enhanced, more so than by any other drug.

515. *Martin on Iron in Acute Rheumatism.*—In the *Med. Press and Circular*, April 1888, p. 375, Dr. Martin records a case of acute rheumatism, successfully treated by large doses of iron. The patient was a carpenter, aged 45, and when first seen by the author he presented all the appearances of a man suffering from acute rheumatism. The treatment first adopted was commenced by a dose of a calomel and jalap powder, with a mixture containing potass. nitrat. and sp. ether. nit.; this, however, did not seem to produce any benefit, and fifteen minims of the tinct. ferri mur. was ordered to be given every two hours. In three days there was a marked change for the better, and he was convalescent within a fortnight. The author remarks that he has had several cases in which iron has acted in a similar way. It undoubtedly controls the disease, reducing swelling, lowering temperature, diminishing pain, and controlling profuse perspiration; but there are often cases in which no benefit is derived from the iron treatment, and these are soon detected, as the drug soon disagrees if it does so at all. [In 1869 Dr. Russell Reynolds treated acute rheumatism with tincture of iron, since which date many observations have been made as to the value of such treatment. Vide *Medical Digest*, sec. 1458 : 2.—*Rep.*]

516. *Dougall on Saccharine.*—In the *Glasgow Med. Jour.*, April 1888, p. 292, Dr. John Dougall contributes an article on saccharine, which is a product of coal tar, and in chemical language a benzol sulphuric amide, having the formula $C_6H_4 \begin{matrix} CO \\ SO_2 \end{matrix} > NH$. It looks like a white amorphous powder, but under the microscope it is finely crystalline. It is slightly soluble in cold water, much more so in boiling water, to which it imparts a faint acid reaction; freely soluble in hot glycerine, alcohol, and in alkaline menstrua. It is said that one grain dissolved in a gallon of water can be detected by its sweet taste. The author made several experiments in order to test its relative antiseptic powers. Portions of urine and beef-juice were found to putrefy in three days if set aside alone, but when mixed with 90 per cent. saccharine powder (*i.e.* saccharine mixed with 10 per cent. sodii carb.), in the proportion of one of the powder to 500 of the urine and of the beef-juice, they did not putrefy for five days. Comparing these results with those obtained by employing other chemicals in the same way, it is found that 90 per cent. saccharine powder comes near to absolute alcohol and zinc chloride in antiputrefactive power, but is 33 per cent. less strong, as these bodies hindered putrefaction, under almost identical conditions, for three days. Again, pure saccharine was found to come nearest cupric sulphate in antifermentive power, which is decidedly high. Some say it is almost as powerfully antiseptic as salicylic acid and thymol. From experiments on the internal use of saccharine, both in health and disease, it seems up to doses of 75 grains practically harmless. It is rapidly absorbed and excreted, being found in the urine unchanged in about twenty minutes after being swallowed. Saccharine is not a food, it is one of the aromatic derivatives, whereas sugar is a member of the class of carbohydrates, and is distinctly a food. At present the uses of saccharine in medicine are few; it is useful in cases where sugar is contra-indicated, such as diabetes mellitus, corpu-

lency, dyspepsia, and hepatic and gouty affections generally. Its antiseptic action may be utilised in cystitis, but, if the urine be alkaline, its acid reaction, when it reaches the bladder, will be easily neutralised, and hence its antiseptic power destroyed. The fact that its aqueous solutions do not ferment like those of sugar suggests a wide scope for its employment in pharmacy, although in this respect, and considering its price (4*s.* per oz.), it has two formidable rivals in sugar and glycerine.

517. *White on the Treatment of Epilepsy by Simulo.*—In the *Lancet*, March 1888, p. 617, Dr. Hale White records some cases of epilepsy in which he has tried the effect of simulo. This drug is the fruit of the Capparis coriaceæ, a member of the hyssop family, found in Bolivia, Peru, &c. Messrs. Christy & Co. have prepared a tincture from the seeds, and this preparation was used by the author. The dose given varied from one to two drachms three times a day, and in some cases a distinct benefit was obtained whilst the patient was taking the drug. A further trial is necessary before one can say that simulo is as good as bromide of potassium in diminishing the frequency of epileptic fits, but it has an advantage over bromide of potassium in being almost tasteless, and does not produce any ill effects if taken for a considerable time. In no case did the patient complain of any disagreeable symptoms from the use of the drug, and the author has swallowed large doses himself without noticing any symptoms whatever. It was tried in a case of cerebral tumour in a child, but produced no effect; Dr. Hutchinson tried it in a case of severe hysterical fits, and also in a case of severe epilepsy, and found it totally useless.

518. *Bokenham on Some Therapeutic Uses of Antipyrin.*—In the *Practitioner*, April 1888, p. 266, Mr. Bokenham contributes a paper on the uses of antipyrin. The author has tried its effects in seventy-seven cases of headache during the last three months. Of these thirty were ordinary migraines, twenty-five due to debility, nineteen were neuralgic, and three ascribable to arterial degeneration from alcoholism or syphilis. Of the first, the results proved most satisfactory; in the headaches due to debility, temporary relief was experienced in twenty of the cases, and this was rendered fairly permanent by constitutional treatment. The author then goes on to give the records of twenty cases of epilepsy in which there was a marked aura, and antipyrin was given to try and avert the attacks. The most convenient form to give it is in the five-grain tabloid, made by Burroughs, Wellcome & Co., though, as a rule, three grains is sufficient for a dose. The results obtained were certainly satisfactory, but in some instances the patients complained of unpleasant after effects from the drug, when it was given in doses of ten grains just before the fit commenced. In the treatment of chorea the author has not met with any striking benefit. Remarking on the frequency with which one meets with patients who suffer from unpleasant after effects from this drug, the author suggests that it is only the first portions that are absorbed and which give relief, and that the surplus dose only throws unnecessary work on the kidneys. If these organs are not acting efficiently, the drug may accumulate in the system and produce poisonous symptoms, so it would be safer to try doses of from three to five grains.

519. *Whitla on the Treatment of Rectal Pain by Conium.*—In the *Practitioner*, April 1888, p. 250, Dr. Whitla draws attention to the value of hemlock as a local anæsthetic in painful affections of the rectum and anus. For many years the author has, from time to time, used conium in such cases, but it is only within the last few months that he has seen much benefit derived from its use, because of the want of uniformity in the preparation of the extract, but since using the succus, he has met with most satisfactory results. An ointment is thus prepared: Two ounces of the succus are permitted to evaporate slowly at a heat under 150° F., till the bulk is reduced to about one and a half drachm. The syrupy liquid thus obtained is then carefully triturated with as much lanolin as will make up the ounce. The author used this ointment in a case of multiple fissures accompanied with intolerable itching, and again in a case of severe tenesmus and excoriations from the pus flowing from an iliac abscess bursting through the levator ani and penetrating the rectal walls; in both cases the result was almost marvellous. The drug appears to paralyse the motor nerves distributed to the fine muscular layer under the surface of the mucous membrane; the reflex twitchings of this layer keep up the perpetual pain and uneasiness in diseases of the rectum and anus associated with abrasions, ulcerations, or fissures; at the same time it undoubtedly paralyses the sensory filaments, and the author has obtained relief from its use in cases of vaginismus, and some painful conditions of the male urethra, besides finding it a good lubricant for the sound or catheter. To the above ointment one may add ten or twelve grains of the persulphate of iron for cases of fissure, as recommended by Mr. Cripps. This latter combination should be tried in cases of fissure before having resort to the knife or cautery. It is, however, in those cases of exquisitely painful fissures or conditions where there is a loss of substance in the mucous surface that the ointment of the succus alone is most valuable. RICHARD NEALE, M.D.

520. *Langgard on Ergot of Rye.*—In this paper A. Langgard gives all the latest researches on this subject. Kobert, one of the principal investigators, distinguishes in ergot of rye three physiologically active organic substances: two acids, the ergotic acid and the sphacelic acid, and one base. Although he did not succeed in obtaining these compounds perfectly pure chemically, his preparations were physiologically pure—*i.e.* the toxicological effects of one substance were not interfered with by symptoms caused by either of the other compounds. Ergotic acid is a narcotic poison, but without specific effect on the impregnated or the normal womb. Sphacelic acid acts very powerfully on the uterus. It is one of the active constituents of the ergot of rye which produces tetanus of the womb. On freeing the ergot of rye of its fats the alkaloid partly passes over into the fatty oil. Cornutine is a violent poison. It acts first, before affecting any other organ, on the womb in pregnant animals, and causes the more violent pains the nearer the animal is to the end of its gestation. Verifying by, and comparing with, the results of Kobert's researches those of other investigators, the following conclusions may be formulated:—*a.* The sclerotic acids of Dragendorff and of Podwyssotzki are a very impure ergotic acid. *b.* All the different ergotins in commerce are unstable mixtures of the active components of the ergot of rye, of which, without exception, the ergotic acid is the most predominant. The Extractum Secalis cornuti of the German Pharmacopœia II. is almost entirely composed of ergotic

acid, and is therefore the least suitable preparation. *c.* Wenzell's ecboline seems to be a very impure cornutine. *d.* The ergotinine discovered by Tauret, an alkaloid which is found as well as the cornutine, is not poisonous, and possesses no action whatever on the uterus. These conclusions induced Kobert to produce a preparation for practical purposes—the Extractum cornutino-sphacelinicum — which contained both cornutine and sphacelic acid. This preparation, however, which as long as fresh realised all expectations, lost, when kept some time, more and more of its efficacy, and became, after about twelve months, perfectly indifferent and inactive. The solid cornutine is free from this drawback, and may be kept for years without loss or impairment of its efficient properties. But there are still some well-founded objections to its general employment. These recent investigations tend to prove that the fresh ergot of rye is a drug of certain action, whereas, on the contrary, all the preparations obtained from it are either devoid of, or uncertain in their specific properties. FERD. ADALB. JUNKER, M.D.

521. *Kast on Sulphonal, a New Hypnotic.*—This substance is an oxidation product of the union of ethyl-mercaptan with acetone. It is diethylsulphondimethylmethan, and its composition is represented by the formula $(CH_3)_2=C=(C_2H_5SO_2)_2$, the term 'sulphonal' being a suggestion of Herren F. Bayer & Co., of Elberfeld, who supply it. Professor Baumann, of Freiburg, and Professor Kast have been lately occupied with the conversion of sulphur-holding organic compounds in the animal organism, and the researches of the former and others are embodied in the *Ber. der deutschen chemischen Gesellschaft*, xviii., 883; *ibid.*, xix., 2803, 2807, 2814; *ibid.*, xxi., 185. Sulphonal is a crystalline substance, without taste or smell, soluble in twenty parts of boiling or one hundred of cold water, easily soluble in alcohol. It is a very stable body, being practically unaffected by acids and alkalies, and it is not oxidised even by chlorine with heat. It causes a tranquil sleep in dogs, preceded by a certain amount of ataxy, and followed by some uncertainty of movement. Large doses caused convulsions, followed by heavy sleep, leading to coma and death. In man no ataxic symptoms appear, but only a tranquil sleep. The drug was given to sixty patients, 300 observations of its effects being made (200 in the Marburg Lunatic Asylum, under Professor Cramer's superintendence). In all cases doses of two or three grammes (30 or 46 grains) caused tranquil and refreshing sleep. The digestion, pulse, and temperature are unaffected, and the blood-pressure is not lowered. E. J. EDWARDES, M.D.

522. *Bonmaison on Antipyrin as a Nervine Medicine.*—Since M. Germain Sée brought his observations on the value of antipyrin in subduing pain, to the notice of the French Academy of Medicine, a large number of trials have been made with somewhat contradictory results. In eighteen cases of migraine treated with antipyrin twelve were completely successful; in two the drug procured some relief, and in four it failed altogether. In thirteen cases of neuralgia, six were promptly and permanently arrested with not more than half a drachm of the drug (in divided doses), and in all the cases a marked relief was experienced for several hours. To this series may be added three cases of acute sciatica and one of lumbago, in all of which a prolonged sedative effect was obtained. It was also given in a number of cases of headache, two of which belonged to the category of 'growing cephalalgia' described by Charcot. One of these was promptly dissipated and the other yielded after a few days' treatment. In three cases of ovaritis, two of pelvic cellulitis, and one of hæmatocele, the sedative action was not only local but general, and contributed materially to the comfort of the patients. The drug appeared to exert a direct influence on the inflamed tissues. The author only has recourse to hypodermic medication when the seat of the pain (leg or abdomen) obviates the inconvenience of the nodules of induration which follow its injection. He never met with an abscess as a result of its use subcutaneously. He generally gives it in 8 grain doses, repeated every half hour, rarely exceeding 40 grains in the aggregate.

523. *Lermuscan on Creolin.*—The advantages of creolin are that it is quite inoffensive both to man and animals. Its germicidal powers are ten times superior to those of carbolic acid, and its action on the spores is even more pronounced than that of the sublimate. Soluble in water, alcohol and glycerine, it appears to have a peculiar calming and curative effect on open wounds. It does not affect the skin nor corrode instruments. Its odour is not disagreeable. The author concludes with the exclamation, *l'iodoforme est morte, vive le créolin.*

524. *Rollet on Antipyrin as a Preventative of Sea Sickness.*—Attention having been called to the alleged good effects of antipyrin in sea sickness, it was resolved to put them to the test on the journey from Marseilles to the Congress for the Advancement of Science, at Oran, which took place in March. The passage was very rough, and most of the passengers suffered. Dr. C. took 10 grammes of antipyrin on leaving shore, and twenty minutes later, when the vessel began to pitch a good deal, he began to feel nauseated; fifty minutes later he began to vomit, and was obliged to lie down. He then took another dose (2 grammes) of the drug. A quarter of an hour later, fresh vomiting, with a feeling as though the stomach had 'got tied into a knot.' Other passengers, Dr. C., Mdme. B., and M. G., also took from one to two grammes. Vomiting, however, occurred an hour later. In fact, the author could quote numerous passengers who took antipyrin, and were sick nevertheless; none of them turned up at dinner, at which only four passengers put in an appearance, and these had undergone no prophylactic treatment. The majority of the sixty passengers who had taken antipyrin had regulated their diet for some days before, so as to avoid any gastric complications, and several had begun taking antipyrin some days beforehand. Recourse was not had to hypodermic injections, because the sufferers became so bad tempered. They even refused to continue to drink a solution of the drug, accusing it of giving rise to the sensation of 'knotted stomach.' The voyage lasted 41 hours. On the return journey on April 16 no better results were obtained. Half the persons who took the drug vomited it at once, and attributed the subsequent sickness to its disagreeable taste.

525. *Loysel on Hypodermic Injections in Malarial Attacks.*—Dr. Loysel recommends the following formula for hypodermic injection in malarial attacks: Liq. arsenicalis, ℥ 50; Quininæ sulph., ʒss.; and tartaric q.s.; Aqua destillata, ℥ 160. Injection for leucorrhœa—Potassium chloratis, 200 grains; Vin. opii, ʒiii.; Aqua picis (tar water), ʒviii.

ALFRED S. GUBB.

526. *Wagner on Hydro-electric Baths.*—Dr. R. Wagner, who prefers the bipolar to the unipolar arragement of hydro-electric baths, gives the following results of his varied experience (*Deutsche med. Zeitung*). 1. The application of weak currents is advisable in treating general nervous diseases. Guided by the individual sensations of patients, increase the galvanic current only until there is the slightest sensation of a change of current, and the faradic current only until there is a pleasant tickling sensation on the surface of the body. Very sensitive persons may be brought to bear the faradic current better if they are first exposed for some minutes to the effect of a moderate galvanic current alone. 2. The effects of hydro-electric baths on the action of the heart are the most interesting and important features from the physiological and therapeutical points of view, and will perhaps in future materially influence diagnosis. In the bath the pulse becomes slower, and the more notably the more rapid it has been before the bath. This fact cannot be explained by assuming an equally diffused stimulation of the skin; for the fact is more strikingly evident in the galvanic bath than in the more stimulating faradic bath. Wagner is rather inclined to see in this the expression of a direct effect of the baths on the inhibitory nerves of the heart. As this effect of the baths was not observed in two cases of heart affection, Wagner presumes that there was a kind of degenerative reaction on the inhibitory nerves of the heart. It is at any rate of great practical importance to know that hydro-electric baths have been of great value in cases of so-called cardiac neuroses, angina pectoris, &c. 3. Particularly striking and constant was the sedative effect of hydro-electric baths, especially in the bipolar faradic form. The sleep was improved, the general health strengthened, and the appetite excited in all cases of general nervous disease.

JOHN ELLIOTT.

REVIEWS.

Article 527.

Nasal Polypus, with Neuralgia, Hay Fever, and Asthma in Relation to Ethmoiditis. By EDWARD WOAKES, M.D.Lond. London: H. K. Lewis. 1887.

THIS little work is an expansion of a paper on *Necrosing Ethmoiditis: its Relationship to Nasal Polypus, &c.*, read by Dr. Woakes before the London Medical Society in March 1885. In it the author seeks to determine the morbid conditions which prepare the way for the development of polypus, and those which lead to its recurrence after removal. The answer to both these questions is, according to Dr. Woakes, contained in two words—'necrosing ethmoiditis.' This new disease is defined by its discoverer as 'a special inflammation of the nasal tributaries of the ethmoid bone, including its muco-periosteal investment.' It reveals itself to the eye as an enlargement of the middle turbinate bone; underlying this swelling there is, we are assured, a process of slow disintegration of the osseous structure, which is gradually broken up into minute spicules and 'squames,' the presence of which is a source of constant local irritation. That such a condition exists is said to be easily proved with the help of a canaliculus probe passed between the middle spongy bone and the outer wall of the nose; and, indeed, we have very little doubt that bone would readily be 'struck' even in a non-ethmoiditic nose with such an instrument by anyone bent on finding it. We gather from Dr. Woakes that the course of evolution from ethmoiditis to polypus is as follows:—First, the turbinate bone puts forth some buds or projections at its anterior part. These subsequently blend together into one mass, and form the 'thickening' which is the key-stone of Dr. Woakes's whole theory, and therefore of his practice, for he is nothing if not relentlessly logical. By-and-by the irritation of the loose bony particles underneath gives rise to 'proliferation,' and a crop of 'soft, reddish, fleshy growths' appears on the swollen surface. The enlarged turbinate bone meanwhile undergoes vertical cleavage at its anterior part by 'canaliculisation,' and from the fissure thus formed spring 'lymphoid or polypoid growths,' which, in due course, develop into full-blown mucous polypi. Dr. Woakes points out that it is not the necrosis which causes polypus but the ethmoiditis—*i.e.* the inflammation of all the structures constituting the spongy bones—which generates both. There cannot, it seems, be polypus without necrosis, but the latter may often be present without the former. The recurrence of polypi after removal or destruction is explained by the persistence of the necrotic soil from which they spring.

The range of Dr. Woakes's theory, however, is by no means confined to polypus, but embraces an almost bewildering variety of ailments, from 'stuffiness' of the nose to hypochondriasis. In fact, in his hands, 'ethmoiditis' is a master-key which unlocks all the mysteries of nasal pathology. Not only the nose, but the ear, the eye, the palate, the larynx, the skin, and the brain are directly or indirectly affected by this apparently trifling lesion, and a formidable catalogue of symptoms is presented which, it is to be inferred, can only be relieved by radical treatment of the *fons et origo mali.*

Dr. Woakes's methods of dealing with a troublesome nose are as 'thorough' as Strafford's government of Ireland. War to the knife,' or, at any rate, with gouge, snare, cautery, ro corrosive acids, must be waged against the offending middle turbinate bone; and, if it be not actually enlarged, it must always be suspected of a tendency to become so. While fully granting the necessity and the efficacy of such measures in many cases, we cannot help fearing that the remedy may sometimes be worse than the disease. In the hands of so judicious and experienced a practitioner as the author of this work there is, of course, little risk of the treatment being applied to unsuitable cases, or too energetically, but there is a seductive simplicity about it that might well mislead enthusiastic beginners into dangerous excesses of surgical zeal.

In conclusion, although we do not believe that Dr. Woakes's theory of the origin of nasal polypus will be generally accepted, and although he is perhaps inclined to exaggerate the part played by hypertrophy of the turbinated bones in the production of reflex morbid phenomena, no candid reader can, we think, fail to be struck by the extraordinary ability with which he argues his case. We should advise everyone interested in the matters which he discusses to peruse the book carefully and with an 'open mind'; the thesis itself is, in our opinion, of secondary importance, but the manner in which Dr. Woakes

supports and illustrates it is most interesting and instructive. The literary style is clear, though somewhat clumsy; but we should like to know why the author has found it necessary to invent such a needless monstrosity as 'trabeculum.'

ARTICLE 5 28.

The Throat and its Diseases. Including Associated Affections of the Nose and Ear. By LENNOX BROWNE, F.R.C.S.Edin. Second edition. Rewritten and enlarged. London: Baillière, Tindall, & Cox. 1887.

WHEN the first edition of this book appeared in 1878, it was the only work in the English language with any pretension to be considered complete. During the ten years which have elapsed since then, there has been no end of the making of books on the throat and all the ills that it is heir to; everyone who can manage to see the inside of the larynx with tolerable distinctness seems to feel it due both to himself and the profession to write a treatise proclaiming the fact. The field of laryngology in fact has been cultivated with such industry by ever-increasing numbers of workers that the soil must be well-nigh exhausted. Mr. Browne's book, however, still remains, in our opinion, the best in some important respects. This position it owes, not so much to its scientific or literary qualities as to the number and excellence of its coloured plates. By means of these the student has *oculis subjecta fidelibus* typical illustrations of every form of throat-disease which he is likely to meet with, drawn from nature by one who, like Sir Charles Bell, combines the trained eye of the surgeon with the cunning hand of the artist. This feature gives Mr. Browne's book a stamp of practical usefulness beyond any of its rivals, and its merit in this respect must of necessity be permanent, whatever changes the whirligig of time may bring on in pathology or treatment.

The present edition is considerably larger than the first, the increase in size being mainly due to the number of new illustrations scattered through the body of the work, to the more detailed descriptions that are given of the anatomy and physiology of the larynx and pharynx, and to the reports of cases which are supplied in considerable abundance. The last-mentioned feature adds greatly to the value of the book, more especially as many of the reports are illustrated by drawings of the affected parts, which give the written description something of the vividness of clinical demonstration.

The general arrangement of the work presents nothing calling for special mention. Considerable space is devoted to the description and illustration of the various appliances used in the treatment of diseases of the throat and nose. Mr. Browne, we observe, strongly recommends galvano-cautery for diseased conditions (hypertrophy of tissue, varicose veins, specific ulceration) of the pharynx and nose, but he is surely too sweeping in his condemnation of its use within the larynx. Massage of the throat is dismissed in a single line as 'of very doubtful value,' though it is a mode of treatment which in suitable cases has already proved undoubtedly beneficial in the hands of B. Fraenkel and others. In the local medication of the larynx, Mr. Browne trusts more to the brush than to the insufflation of powders; we are pleased to see, however, that he 'testifies' strongly against nitrate of silver, either solid or in solution, as an application to this delicate part. Mr. Browne's 'physiological' argument against the use of powders in nasal disease is not very convincing to anyone who has seen—or felt—the almost magical relief often given by 'Ferrier's snuff' in acute coryza, and the less immediate but not less decided benefit afforded by similar preparations in chronic catarrh when the parts have been properly cleansed beforehand.

In the chapter on the General Etiology and Pathology of Throat Diseases, Mr. Browne lays great stress on defective methods of voice-production as the cause of much mischief, and indulges in a somewhat gratuitous digression on the value of the laryngoscope as an aid in the training of the singing voice. The chapter on Diseases of the Pharynx is one of the best in the book, although—as is almost inevitable in the work of a specialist—there is a tendency to over-refinement, and to the needless multiplication of names for a number of conditions which are not separate diseases but local varieties of the same morbid process. Mr. Browne attaches much importance to the treatment of the *pharynx* in many cases of impairment of voice in which the larynx might *à priori* be thought to be the peccant part. In the chapter on Exudative or Membranous Inflammation of the Larynx, Mr. Browne argues strongly, though with no particular novelty, against the identity of croup and diphtheria. In the local treatment of the latter disease he seems to place most reliance on applications of lactic acid. An extremely meagre account is given of intubation, of which Mr. Browne speaks in terms of the faintest possible praise, though apparently without having had any personal experience of the operation.

The chapter on Lupus of the Mouth, Pharynx, and Larynx is particularly good from the clinical point of view. It embodies the results of some original observations which show that the throat is more frequently the seat of lupus in patients suffering from the cutaneous form of the affection than has hitherto been supposed. In treating of Benign Neoplasms of the Larynx, we find Mr. Browne still adhering to his well-known opinion that they 'not unfrequently assume a malignant and even cancerous character by the irritation produced by attempts at removal.' In our review of the first edition of the present work it was pretty conclusively proved, as we take leave to think, that there is little or no foundation for this opinion, in which, it may be added, the author stands almost alone among laryngologists. In removing such growths Mr. Browne appears to prefer the snare or the sponge-probang to the forceps.

In his section on Nasal Diseases Mr. Browne gives ample evidence of having closely studied the writings of Dr. John Noland Mackenzie, of Baltimore, who is one of the leading spirits of the new pathological sect which regards—and treats—the nose as the root of all evil in the human economy. Our author's practical experience, however, has been far too extensive to allow him to be misled by mere theories, however plausible, and his remarks on nasal disease and its treatment are marked by sobriety of tone and sound common sense. The book ends with a sketch of diseases of the ear, so far as they are associated with naso-pharyngeal disease.

On the whole, Mr. Browne's book can be recommended to students, and still more to practitioners, as a clear, sound, and practical guide to the diagnosis and treatment of diseases of the throat. His ex-

perience is not only large, but ripe, and he gives his readers the full benefit of it. A particularly praiseworthy feature is that from beginning to end Mr. Browne, whilst giving due prominence to local measures, never fails to insist on the necessity of supplementing these by proper constitutional treatment. The book is well printed and handsomely got up, though a trifle unwieldy in size. In this respect, however, it is considerably less objectionable than the first edition. Mr. Browne seems to have been rather careless in reading his proofs, and several of his pages are disfigured by errors like 'buginariæ' (p. 124), 'pars arytenoide*i*' (p. 392), 'dart*h*ous' (pp. 185 and 225), 'sphinct*o*r' (p. 476), to mention only a few which we have casually noted.

ARTICLE 529.

On the Surgery of War. Traité de Chirurgie de Guerre. Par E. DELORME, Méd.-Major de 1re Classe, Professeur de Clinique Chirurgicale au Val-de-Grâce. Tome 1er, pp. 668. Paris: F. Alcan. 1888.

THE volume recently issued by Professor Delorme is an instalment of a complete treatise on the injuries resulting from war and their treatment. It is to be followed by a second volume, which, the preface informs us, is actually now passing through the press, but will not be published before the commencement of the year 1889.

More than half the volume before us—viz., 370 pages—is devoted to a history of French military surgery. The state of military surgical practice, as displayed in the published writings of French authors, is reviewed in a series of sections which embrace successive periods of time; the first commencing from the date of the original use of gunpowder in war, at the battle of Crecy in 1346, and extending to the end of the sixteenth century, while the second and third sections respectively comprehend the periods of the seventeenth and eighteenth centuries. A fourth section is allotted to the period of the French Revolution and First Empire; the succeeding section to the time of the Restoration and subsequent political changes from 1815 to 1852; the sixth section embraces the period from the date last named down to the present time. Although this part of the volume is entitled a 'History of French Military Surgery,' the author professes to notice the state and progress of military surgery in other European countries at periods corresponding with those included in the several sections previously enumerated, but how meagre these notices are may be illustrated by the remarks of the author upon the publications on military surgery in the various States of Europe, France excluded, between the years 1815 and 1850. 'The writings in other European countries,' the author remarks, 'from 1815 to 1850 are very few in number, and in general are without much importance. In England we have only to note the *Outlines of Military Surgery* by Ballingall, a work rather devoted to a study of the diseases of soldiers and questions relating to the economy of armies than to army surgery properly so called, and, allied to it, the notes by Alcock (*Notes on the Medical History of the British Legion in Spain*).' To British readers who are acquainted with the numerous important works, treatises, and papers which were published, in the course of the years mentioned, by British surgeons who had previously had large experience in the treatment of the injuries produced by war in the great battles of the Peninsular campaigns, at Waterloo, and in successive wars in India, this observation of Professor Delorme will, to say the least, appear strange. Throughout this part of the work frequent remarks occur pointing to the great development and high degree of splendour attained by military surgery in France, at the same time that the author indicates the limited amount of merit attached to the writings on the subject in other countries. In reading these observations we may admire the patriotic feelings which have dictated the sentiments expressed by the author, though we may well doubt whether surgeons in the other countries referred to, better acquainted with what has been done in them, will be inclined to acknowledge their accuracy.

Professor Delorme furnishes sketches of the careers and writings of a very long array of French civil and military surgeons who have written on the treatment of gunshot wounds and other injuries of war. The names of many of them, as might be expected, are hardly known out of France, but the records collected regarding them exhibit a large amount of painstaking research, and will, no doubt, notwithstanding the length to which they are extended, present features of interest to many of the author's compatriots. To the practitioners of other countries, whether military or civil, the accounts given cannot, in numerous instances, afford any information of value. Exceptions in this respect are the biographical notices and records of a few surgeons of European reputation, and, conspicuous among these, are the histories of the universally esteemed Ambroise Paré and Dominique Larrey. The careers of those distinguished surgeons are not described at any greater length than their pre-eminent merits warrant. Perhaps no surgeons in any other country have had the opportunities of acquiring experience in actual war to such an extent as Ambroise Paré had, who, our author mentions, was engaged and practised in forty campaigns, or as Larrey, the friend and one of the heirs of the First Napoleon, who took part in sixty pitched battles, and in more than 400 combats; and certainly none have combined with such vast opportunities the ability and perseverance to record the results of the experience thus gained in writings so ample and at the same time so full of interest and instruction as they have done. The works of Paré possess an historical interest which can never be effaced, and the writings of Larrey, together with those of Desgenettes, Percy, and other distinguished French military surgeons of the First Empire, may still be studied with advantage and profit by the army surgeons of every nation.

The historical part, just noticed, is introductory to the more strictly professional division of the work. In the present volume the wounds and injuries of the soft structures of the body, and their complications, are more particularly considered; a description of the wounds and injuries of the bones and joints, and of others in which the principal cavities of the trunk and special regions of the body are involved, is to follow in the succeeding volume, which, as already mentioned, will not appear until next year.

The surgical section of the present volume is divided into eight chapters and is illustrated by ninety-three woodcuts. A detailed description of the weapons, and of the firearms with their projec-

tiles, in actual use in the French army, as well as in the armies of other countries, are given in the first chapter. Illustrations of the projectiles, including those used with portable arms and those belonging to guns of large calibre, accompany the descriptions of them in the text. We notice that the two drawings illustrative of the projectiles used during recent years in the British army—the projectiles of the Martini-Henry and Snider converted Enfield rifles—are not given with that precision of form and measurement which might have been expected in a work of the kind before us; indeed, the arrangement of the cannelures exhibited in the drawing of the last named of the two projectiles would obviously increase resistance and materially impede the flight of the projectile through the air. The fault has no doubt been on the part of the engraver and must have escaped the notice of the author. The account of the projectiles themselves is followed by a description of the principal general laws which determine their movements and impart to them their destructive force. These explanations are given at considerable length and with adequate clearness.

The second chapter treats upon wounds inflicted by cutting and stabbing weapons, while simple wounds of the soft parts of the body by the smaller forms of projectiles are considered in the third chapter. The fourth is a brief chapter devoted to an account of experimental researches on the effects of small projectiles on the dead body. The author appears to have had unusual opportunities of carrying out such investigations, such as it would be impossible to obtain in England, for he mentions that in the year 1880 he had caused to be fired at the Val-de-Grâce, on all points of the body, as many as 3,000 shots, while in the following year 1881 he had completed his observations on lesions of bones by using 1,000 cartridges of the Gras rifle. There can be no dearth of cadavers at the Val-de-Grâce. The varieties of lesions produced on the soft parts of the body by the heavier kinds of projectiles and by shell fragments, are discussed in the fifth chapter of this section.

The general characters and particular features of uncomplicated wounds of the soft parts having been described in the chapters just enumerated, the immediate complications which occasionally attend these injuries are treated upon in the following chapter. The primary complications described in this, the sixth chapter, include the various lesions, contusions, as well as wounds of arteries, veins, and nerves, and the lodgment of foreign bodies in wounds by gunshot. The various effects of lesions of the blood-vessels by projectiles—obliteration, gangrene, ulceration, hæmorrhage, traumatic aneurysm, and others—together with the treatment of these several consequences, are here fully discussed. Copious illustrations of the provisional modes of arresting bleeding in the principal vessels accessible are given in this chapter, and the definitive treatment of hæmorrhage after shot wounds is then considered. In the operation of transfusion of blood in cases of excessive loss of blood and threatened dissolution, the author prefers the apparatus of Dr. Roussel, of Geneva, to all others, and a very artistic and effective illustration of the performance of the operation by means of this instrument is inserted in the text. Lesions of nerves resulting from projectiles are now treated upon. The very varied results which from time to time follow such lesions, including tetanus, a disorder so frequent in former wars and relatively so remarkably rare in modern wars, are fully described. A full digest is given of the extensive and important observations, published by the American surgeons, Weir Mitchell, Morehouse, and Keen, who for a period of fifteen months, during the great War of the Rebellion in the United States, had a hospital specially devoted to the reception of wounds and disorders of the nervous system placed under their care by the surgeon-general of the United States army, Dr. Wm. Hammond. The next complication considered is the lodgment of projectiles and other foreign substances in wounds inflicted in warfare. The subject of exploring for such foreign bodies, and the modes of their extraction when discovered, are dwelt upon at some length, and numerous illustrations of the instruments which have been employed for these purposes at various times accompany the text. A consideration of the subject of traumatic gangrene as a primary complication of wounds concludes this chapter. The dressings and materials made use of in army surgery, especially the dressings applicable to simple wounds of the soft structures of the body, are described in the seventh chapter; while the last chapter of the volume, the eighth, which occupies sixty pages, is devoted to an exposition of the secondary complications to which gunshot wounds of the soft parts are liable, such as secondary hæmorrhage, the remoter effects of nerve lesions, and hospital gangrene. The history of the occurrence of hospital gangrene in armies, the different forms which the disease assumes, its special features, and the conditions which favour its development, are described at length, and form the concluding topic of the volume. The reports published at the time of the circumscribed occurrence and attenuated gravity of this disorder among the well-provided-for troops of the German army, and its dissemination in an epidemic and fatal form among the ill-fed and disheartened troops of the French army, during the war of 1870–71, will be in the recollection of many of our readers. Its stated prevalence in France at the time of this war is confirmed by the author of the present work, who relates that 'at Sedan, in the midst of the agglomeration of wounded troops, exhausted, demoralised, badly nourished, hospital gangrene attacked the patients with virulence, all the more so because the malady had been prevalent in the hospitals of the town prior to its surrender. The wounded transported from Sedan, to hospitals in different directions in the north of France, conveyed and disseminated the disease among them,' &c.

The professional section of the volume which we have just been noticing has been prepared with much care and skill, and a study of the numerous subjects embraced by it is greatly facilitated by its systematic and methodical arrangement. If the forthcoming volume be prepared with a similar amount of attention, and especially if it be not too much restricted to French experience, but the vast store of knowledge on war injuries contained in the magnificent surgical volumes issued by the United States Government on the 'War of the Rebellion,' together with the later experience published by the military surgeons of North and South Germany, be sufficiently sifted and turned to account, Professor Delorme's treatise will certainly be recognised as a leading work on the injuries produced by warfare and their treatment.

ARTICLE 530.

An Index of Symptoms. By R. W. LEFTWICH, M.D. London: Smith, Elder, & Co. 1888.

DR. LEFTWICH has compiled with infinite care and pains a small and useful book with the above title. He has enumerated the symptoms and signs of disease, and under each heading has placed the names of the disorders, in the course of which such symptoms or signs may occur. It is not pretended for this book that it should in any sense take the place of systematic works on medicine; its *raison d'être* seems to be the trouble that occasionally arises in the diagnosis of a difficult case, when some prominent symptom cannot at once be referred to its cause.

A study of the symptoms in this book will at once give all the known conditions likely to produce it, and these may then be investigated by the help of the ordinary text-books. Dr. Leftwich's purpose will certainly be served by this book, and it will be a useful addition to any medical library, though we hardly think it will need to be so often consulted as Dr. Leftwich supposes. It is very rarely indeed that a group of symptoms does not sufficiently indicate the nature of the disease, but such a case may arise, and the Index may then usefully and profitably be consulted. R. M. SIMON, M.D.

ARTICLE 531.

Lectures to Practitioners.—On the Diseases classified by the Registrar-General as Tabes Mesenterica. By W. T. GAIRDNER, M.D., LL.D.—*On the Pathology of Phthisis Pulmonalis.* By JOSEPH COATS, M.D. London: Longmans, Green, & Co.

THE first part of this interesting volume consists of four lectures and an appendix of cases and remarks by Professor Gairdner on the subject of *tabes mesenterica.* After a close critical examination of the views held by various authorities as to the nature of this disease, Dr. Gairdner states as the result of his own observations and experience that the 'mesenteric glandular disease is by no means the exclusive or even the chief pathological element in the symptoms commonly attributed to it,' and that 'as a cause of abdominal intumescence in young subjects it very rarely indeed happens that mesenteric disease of any kind exists without complications such as would make it impossible during life, and barely possible after death, to assign to the mesenteric glands any separate share in the symptomatology of the disease.' Fatal mesenteric glandular disease, he had observed, 'was invariably complicated with disease either of the mucous or of the serous surfaces to such an extent as to make it extremely probable that the mesenteric tumours were of quite secondary importance, both in the diagnosis and in reference to the theory of the case;' and his contention is that '*tabes mesenterica*, considered in the natural signification of the words' (*i.e.* as tubercular disease of the mesenteric glands), 'has practically disappeared from observation as an independent disease, to be replaced by other and much more complex conditions, among which tubercular peritonitis on the one hand, and tubercular ulceration of the mucous membrane on the other, are the chief and enormously preponderating factors entering into the diagnosis.'

It is mainly to the expansion and illustration of these views that these lectures are devoted. He refers to his own 'unfamiliarity with mesenteric glandular disease, recognisable distinctly as such'; and he maintains that although '*tabes mesenterica* is a very common name, and stands for a considerable figure in the Registrar-General's returns, very few instances really occur of primary disease of the mesenteric glands.' A 'thickened omentum' he regards as yielding some of the most significant characters in many cases of the variety of chronic peritonitis, commonly called *tabes mesenterica.*

His argument is that there is no sufficient basis, either in pathology or in nosology, for the name *tabes mesenterica* as applied either to one disease or to a group of diseases; he does not, however, wish to imply that tubercular disease of the mesenteric glands is either infrequent or unimportant, 'but that it is so constantly associated with, and symptomatically blended with, other morbid conditions as to have been incorrectly assumed as the special designation of a group.'

Assuming that prominence and induration of the abdomen in young children are the most striking features of the disease, he further insists that, although tubercles of the mesenteric glands may be found, it is 'impossible to maintain that such tuberculous glands are the cause of the abdominal enlargement, and it is more than doubtful whether they are in most cases the cause of the fatal atrophy.'

In connection with this argument he very pertinently points out a fact that is too commonly lost sight of, especially in the present day—viz., that the information yielded by pathological anatomy is 'information with a bias. It has told us in great detail and with great precision what has happened to those who die; it has not told us with anything like the same precision, sometimes it has not told us at all, what has happened to those who recover.'

He contends that the prognosis in these cases is usually far too gloomy, and presents instances to show that cases indistinguishable clinically from the so-called cases of *tabes mesenterica* do recover.

His own observations have led him, therefore, to conclude that occasionally permanent recovery may occur 'from tubercular, or at least from chronic, peritonitis.' . . . 'I have no hesitation in assuming,' he adds further on, 'that *tabes mesenterica* in every aspect of it is susceptible of curative processes, the precise nature of which may be admitted to be imperfectly known.'

The concluding lecture is devoted to the consideration of the preventive, hygienic, and curative treatment of this disease.

The second part of the volume consists of five lectures by Dr. Coats, 'On the Pathology of Phthisis Pulmonalis.' He starts by admitting how little success attended his early efforts to discriminate between tubercular and non-tubercular phthisis, and how conscious he at length became that the essential pathology of the disease had not then been attained.

He now recognises in the clinical and anatomical history of phthisis two, more or less, distinct forms: the caseating form and the fibroid form both, however, he believes to be tubercular in nature.

The anatomical and clinical characters of these two forms of phthisis are clearly set forth, and the relation of the fibroid form to complementary emphysema and bronchiectasis is fully detailed, and some practical illustrations are given.

Certain conditions allied to phthisis are next

passed in review, such as syphilitic disease of the lung, glanders and actinomycosis, gangrene of the lung, chronic pneumonia and diseases due to the inhalation of dust, but the author rightly maintains that it is 'expedient to limit the term phthisis pulmonalis to true cases of tuberculosis.'

'Phthisis pulmonalis is essentially a tubercular disease, and this term is virtually synonymous with pulmonary tuberculosis.'

In discussing the causation of phthisis the author has nothing that is original to advance, and this part of the subject is scarcely treated satisfactorily. Dr. Coats does not appear to have made himself fully acquainted with what has been published in this country and abroad during the last few years on the question of the modes in which pulmonary phthisis has been proved to be propagated, and the facts and arguments he briefly quotes are scarcely on a level with the actual knowledge of the day.

The last lecture is devoted to the consideration of those 'Secondary Phenomena outside the Lungs,' which are observed in certain cases of phthisis.

J. BURNEY YEO, M.D.

ARTICLE 532.

Surgical Applied Anatomy. By FREDERICK TREVES, F.R.C.S., Surgeon to, and Lecturer on Anatomy at, the London Hospital; late Hunterian Professor of Anatomy and Wilson Professor of Pathology at the Royal College of Surgeons of England, &c. Illustrated with 61 Engravings. Third Edition. Cassell & Co., Limited.

THIS work has deservedly reached a third edition. The progress of modern surgery has been particularly active in the direction of the great nerve-centres. Mr. Treves has recognised this fact, and therefore devoted chapters to the vault of the cranium, the brain, and the spine, subjects unfamiliar to the readers of older works on surgical anatomy. The chapters on the regional anatomy of the abdominal viscera are of the highest value, both on account of the experience and knowledge of the author and because of the multitude of operations which are now performed upon the abdominal and pelvic organs. The multiplicity of current text-books is undoubtedly an evil. This fact has repeatedly been urged in modern reviews, but another fact is inseparably associated with the demand and supply of text-books. There is always room for a good book. Mr. Treves's *Surgical Applied Anatomy* illustrates this second fact, which is proved in this case by the issue of a third edition.

ALBAN DORAN.

ARTICLE 533.

La Phthisie Pulmonaire. Par MM. H. HÉRARD, V. CORNIL, et V. HANOT. Second Edition. Revised and enlarged. Pp. 840. Paris: Félix Alcan. 1888.

THE first edition of MM. Hérard and Cornil's work on *Pulmonary Phthisis*, published in 1867, held for a long time after its publication a leading place among the many treatises that have appeared on the subject. Since the discovery of the tubercle-bacillus, and the impetus which that discovery gave to the study of tubercle from the bacteriological point of view, attention has been more and more closely given to the exact part which the bacillus plays in the production and maintenance of the disease. The authors of the work before us have once again stepped to the front rank, and have given to the profession a very full and complete history of pulmonary phthisis, looked at in the new light which the discovery of Koch has thrown upon it.

So much has this discovery transformed every aspect of the subject that those familiar with the first edition of the book will find the present, in all essential points, a new work. The authors make no reservation in their acceptance of the causative action of the tubercle-bacillus. Phthisis is the outcome of a form of chronic inflammation of the lung-tissue, induced by the presence of the bacillus, which may gain access to the affected parts either through the air-passages direct or through the blood-vessels or the lymphatic channels. The nature of the disease is essentially specific, and the complete identity of the grey granular tubercle with the yellow caseous masses is to be accepted as proven fact. It is not, however, claimed that the whole process is at present capable of clear explanation, and many directions are indicated in which further facts are wanting to complete the chain of argument.

As in the former edition, the opening chapter is historical, and a most complete *résumé* is given of the work done in former years by French authors; but, if exception can be taken to such a natural partiality, it might be urged that much original work has been done in the past by English observers, and notably by Addison, which finds no recognition on the part of the historians.

A very careful and detailed description is given of the labours of Koch and of the experiments and results which have led to the acceptance of the parasitic theory of the causation of phthisis, and then follows a long and very thorough investigation of the pathological processes, beginning with the formation of the grey granulation. This is followed out from the period of the first appearance of the bacillus in the wall of the capillary vessels in relation with it, to its termination in coalescence with neighbouring granulations to form the yellow nodule, or its conversion into fibrous material, or lastly its caseous degeneration. After making clear distinction between the tubercular nodule and that produced by simple inflammation and by cancer, glanders, syphilis, and leukæmia, the authors proceed to follow out in detail the tubercular process as it severally affects the serous and mucous membranes. In the course of this description they show with admirable clearness, both in description and by means of carefully executed drawings, the true relation of the bacillus to the various parts of the tubercular nodule, and endeavour to prove the primary incidence of the bacilli and the secondary nature of the subsequent changes which are found to be going on about them. That the bacilli may enter the tissue of certain mucous membranes from beneath, and push their way in all directions, and especially in the direction of the surface, in the interspaces of the layers of epithelium, is very clearly shown. That they may travel independently, or in the substance of wandering cells, is also made manifest, and it is established to the satisfaction of the authors that vessels containing them may become filled with a thrombus, and that the endothelial cells of the vessel, caught in the meshes of it, may become converted into giant-cells, always containing bacilli in large numbers.

As a general principle it is admitted that tubercle has almost always a vascular origin, but the authors would amplify this and maintain that it is essentially

the afferent channels, whether sanguinolent or lymphatic, for which the bacillus shows partiality. 'The tubercular neoplasm fixes on these channels like a parasitic plant on the trunk of a tree.' Periarteritis, and subsequently obliterative endarteritis, may thus be produced, while in the lymphatic channels the obstruction is followed by softening, and then ulceration and elimination of the tubercular products. Tuberculosis of all the organs of the body is passed in review, and that of the lung is the subject of exhaustive treatment. Some disappointment may possibly be felt at the rather meagre description of the tubercular affections of the larynx, which may be described as by no means 'up to date.' The searching work and admirable results recorded from time to time by Professor Heryng meet with no recognition whatever, and although throughout the book a vast amount of contemporary work is quoted and commented upon, it cannot fail to strike the reader that in many instances the choice of authorities has not been altogether happy. Too frequently it happens that a small and isolated observation recorded by an observer, whose work does not carry with it any evidence of special knowledge or study of the subject with which he deals, is put prominently forward to the exclusion of the carefully ascertained facts of tried and competent observers. Possibly this defect may be especially marked in the case of the English authors, but instances are not far to seek where trustworthy observations of German writers also obtain but scanty recognition. The clinical description of phthisis is divided into two parts, dealing respectively with acute and chronic phthisis, and the authors in their preface claim for the former chapters the respect due to thorough and complete work, a claim which will probably be cheerfully conceded even by those who cannot accept their classification in all its details. In this section of the work there is less scope for originality in regard to observation of fact, but the description of the clinical aspect of the disease in its various forms is accurate and complete. In respect of the tubercular affections of the larynx, however, one or two points have crept in to an otherwise satisfactory description which are not only incorrect in fact but liable to lead to much error in treatment. The differential diagnosis between syphilis and tubercle of the larynx is made to rest chiefly upon such points as pain, dysphagia, &c., all of which obviously depend upon the position and extent of the local lesions, and not upon the specific cause which may have originated them. The symptoms recorded are common to both, and also to non-specific forms of laryngitis and perichondritis at various stages of their progress. The final chapters of the work are devoted to a consideration of treatment. The results obtained by the attempts hitherto made to check the development of the bacillus by direct antiseptic medication are fully considered. Like many other writers who have reviewed this subject, the authors are by no means enthusiastic as to its applicability in general or as to its real advantage in individual cases. The more the phthisical process is regarded as a contest between the natural cycle of physiological changes and the efforts of the bacillus to interfere with them, the more plain does it appear that the aim and object of the treatment must be the maintenance of the normal health. Every process hitherto suggested for the destruction or disablement of the bacillus *in situ* is more or less opposed to such maintenance. A concise reference to a large number of health-resorts to which recourse may be had for the climatic treatment of phthisis concludes a work which may be regarded as the most complete and exhaustive treatise on the subject which has appeared in recent years, and which well maintains the high standard of work for which its authors' names are a perfect guarantee.

E. Clifford Beale, M.B.

Article 534.

Procès Criminel de la Dernière Sorcière, brûlée à Genève le 6 Avril, 1652, *publié d'après des documents inédits et originaux, conservés aux Archives de Genève*, par le Dr. Ladame, aux Bureaux du Progrès Médical. Paris, 1888.

This is apparently the sixth of a series called the *Bibliothèque Diabolique*, designed to give information about the old superstitions of sorcery and demoniacal possession. As we learn from the title, the last witch was burned at Geneva in 1652, but it was not till seventy years afterwards that the last witch was executed in Scotland. The details in the work under review bear much resemblance to the witch trials held in Great Britain and New England.

The accused was a widow called Michée Chauderon, a native of Savoy, aged 50 years, who worked as a washerwoman. She was accused of making several women ill by eating peas with one and preparing soup for others. An infant whom she had touched turned out deaf. A woman called Pernette was her principal accuser. The devils who possessed Pernette used her voice to assure the bystanders that they were demons, and that Michée was their mistress. The poor woman was then imprisoned, and two surgeons were called upon to examine her. These surgeons were treated like scientific witnesses in the present day. They were admitted to examine the prisoner, and looked for what they called stigmata or devils' marks. Covering her eyes, they ascertained there was one place in her body, a little under the left breast, where there was a mark or mole about the size of a lentil. In this spot they found little sensation of pain; a needle being plunged into the place, no blood issued out. They considered this 'quite extraordinary and suspicious.' Next day a doctor of medicine and the two surgeons were sent to interrogate the devil in her. The demon answered in French that his mistress was Michée, the washerwoman, but, when addressed in Latin and Greek, he gave no answer. Suspecting that a spirit who had no classical training was no real devil, they suggested that Pernette should be confronted with the pretended witch. Not at all satisfied with this report of the medical men, the magistrates of Geneva wrote to Nyon saying that their medical experts were unable to say if certain marks on the body of the supposed witch could be regarded as proofs of sorcery. The letter continues:—'We have an interest to find out those who are attainted of such abominable crimes, and knowing that you have at your disposal persons intelligent and experienced at the discovery of such marks, we pray you affectionately for the aid of justice to order two of the said experts whom you choose to come as soon as possible to our town to assist at the new visit to the said prisoner. We promise them reasonable acknowledgments of their trouble,' &c.

The experts sent from Nyon were one doctor of medicine and two surgeons. Having examined Michée Chauderon, they did not think, as far as their reading and experience went, that the marks under the right breast were of satanic origin, but they found two new spots, one on the upper lip, the other on the right thigh, which were insensible to the prick of a needle, and which were not similar to spots of leprosy. 'As, considering the nature of these marks,' they go on, 'we find them absolutely similar to those that experience has made us see in persons accused and condemned of sorcery, as also to the description which authors have made of these marks, we therefore believe that these two marks upon the lip and the thigh are not those of any disease or purely natural cause, but that they give a just suspicion of being satanical marks, in confirmation and faith of which we have signed below,' &c.

In consequence of this report Michée was put to the torture. At first she denied all the accusations, but after renewed inflictions of pain the miserable woman was carried from one stage after another to yield to their leading questions, and to confess that she had seen a shadow in a wood which she imagined might be the devil, and that he marked her in the three places—those indicated by the doctors. A hare had on one occasion approached her, which she believed might have been the devil, and a small ass had presented her with an apple, which it dropped from its throat on the ground. She acknowledged doing harm to two persons named, and confessed that she was deserving of death.

It is quite clear the confession was wrung from her through torture, and they managed to keep a hold over the wretched woman up to the last moment, for in consideration of her confession she was hanged before her body was burned. Had she remained impenitent she would have been burned alive.

It is known that there are spots upon the skin in some people which are nearly or quite insensible to pain. The reference to lepra made by the experts of Nyon shows that they were aware of some instances of the kind. Dr. W. T. Gairdner, in a remarkable paper entitled 'A Modern Witch Medically Examined,'* has given us the description of a female patient who would most likely have met with the fate of Michée Chauderon had she lived in the seventeenth instead of the nineteenth century. In this woman the sense of pain was extremely deficient all over her body. On being pricked 'she felt the contact and knew exactly where it was, and that it was that of a pin; but the sensation was not of pain, but "just a little bit more" than that of real contact.' Hemi-anæsthesia following upon hysteria has been carefully studied by Briquet, Charcot, and others. They have also found in some cases anæsthetic spots scattered over the surfaces—the devil's marks of the old witch-finders.

Dr. Ladame praises the courage of Dr. d'Aubigné and his two medical colleagues in daring to call the accused Michée a pretended witch, and in giving an equivocal report about her. But if we recollect that the elaborate work of Jean Wier, in which the current stories of demoniacal possession and witchcraft are treated as the results of illusion and imposture was published at Basel in 1566, one can only say that the medical men who signed the report were unhappily under the influence of the credulity of their age. A reprint of Wier's book forms the third volume of the *Bibliothèque Diabolique*.

W. W. IRELAND, M.D.

* *Insanity: Modern Views as to its Nature and Treatment*, by W. T. Gairdner, M.D., &c. Glasgow, 1885, p. 52.

NOTES ON BOOKS.

ARTICLE 535.

MAGAZINES AND PERIODICALS.

The Transactions of the Obstetrical Society of London for the last quarter of 1887 contain, among others, a successful case of operation for hæmatocele by Dr. John Phillips, who opened up the sac *per vaginam* with the cautery. Mr. George Lowe contributes an interesting case of atresia of the cervix from pressure, with escape of the menstrual fluid between the walls of the vagina. Dr. Meredith has a paper on a case of supra-vaginal hysterectomy for hæmatometra associated with a degenerating fibromyoma. Dr. G. E. Herman gives a very exhaustive paper on delivery by the vagina in extra-uterine gestation, and Dr. Champneys follows with a discussion on primary laparatomy in the treatment of the same abnormality. Dr. Williams and Mr. Alban Doran both contribute cases in which they have operated for ectopic pregnancy. The number, on the whole, is of more than usual interest.

The April number of the *American Journal of the Medical Sciences* contains, as usual, a large amount of interesting and instructive material. There is a careful study by Dr. W. A. Edwards of that ill-understood condition known as membranous enteritis. Dr. Fuller, of Brooklyn, contributes a case of alarming hæmorrhage following excision of the tonsils which even ligature of the common carotid failed to arrest, although as far as could be made out no vessel had been wounded. Among others a comparative study of Pott's fracture by Mr. J. Bland Sutton may be noticed. The remainder of the journal is taken up with reviews and a remarkably full digest of researches and observations in the various departments of medicine.

The Dictionnaire Annuel des Progrès des Sciences et Institutions Médicales, par M. P. GARNIER, has now attained its twenty-third year, a fact which testifies to its value, and it is with great regret that we learn that, owing to the disinclination of the publishers to continue the undertaking, this volume is the last of the series. The reason alleged is that the medical public are no longer satisfied with analyses and brief generalisations. We should have thought that the very abundance and multiplicity of subjects would render an annual analysis and *résumé* the more valuable, but the publishers' balance-sheet testifies to the contrary. Few clinical discoveries of importance are recorded. Alcoholism and syphilis have given rise to prolonged and anxious discussions, but without much practical fruit. Therapeutical science, on the other hand, daily adds to its scope, especially in the three groups of antiseptics, anæsthetics, and antipyretics, the most noteworthy being antipyrin and strophanthus. In surgery the rapid extension of laparotomy calls for special remark, but, though interesting, it would be tedious though not unprofitable to follow its applications. In gynæcology the author foresees that spaying will shortly become as general in Europe as in the United States,

and he appears positively to regret the innocence and facility of the operation. The volume concludes with an eloquent *résumé* of facts bearing on 'over-pressure' in schools. ALFRED S. GUBB.

ARTICLE 536.

Estudios Acerca de la Rabia y su Profilaxis. Por JAIME FERRAN. Barcelona, 1888.

DR. FERRAN'S monograph on the prophylaxis of rabies by inoculation is a reissue of four papers recently published by him on this subject. The first of these is chiefly concerned with the results of supra-intensive inoculations (dosis masivas) upon human subjects, the virus being obtained as usual from rabbits.

He maintains that his experiments show that this proceeding is absolutely devoid of risk, while the use of attenuated virus is inseparable from the dangers of sepsis.

He employs during the treatment 40 c. c. of an emulsion containing 10 c. c. of brain pulp, not attenuated in any way. From the table which accompanies the paper it appears that from May to December 1887 85 cases in all were inoculated; 25 were bitten by animals known by the officials of the laboratory to be rabid; 8 were certified to be rabid by local veterinary surgeons or medical men; 37 were bitten by animals suspected to be rabid, but as to whose actual condition there was no actual evidence; and 8 were 'individuals of various ages, not bitten by rabid animals, who subjected themselves to the supra-intensive treatment to show its inocuousness.' No deaths have occurred.

The second paper is an account of a case in which a patient who had been under prophylactic treatment (supra-intensive) after having been bitten by a dog which was proved by experiment to be rabid.

He came to the laboratory the day after he was bitten, and during the next fortnight received 44 non-attenuated inoculations of rabid cerebral pulp (rabbits'), and on one day two inoculations of attenuated virus three days old. These last inoculations were followed by local irritation. Two days later the patient had vague symptoms of malaise, followed by precordial pain; then facial paralysis, and, finally, general paralysis of the trunk and limbs (!) with abolition of electric contractility. This continued for some days and gradually disappeared.

Dr. Ferran holds that this was a case of paralytic rabies, and that this condition is due, both in men and in rabbits, to an extraneous chromogenic microphyte, which is apt to be present in an attenuated virus, but not in the fresh non-attenuated one which he employs in the supra-intensive treatment.

His third paper is concerned with some of the drawbacks which attend inoculation by trephining for the purpose of acquiring the supplies of virus, and suggests that a more convenient and a more physiologically perfect method would be to inject the virus into the anterior chamber of the eye.

The last paper is an essay upon the Pasteurian or prophylactic treatment, and is, as might be anticipated, entirely laudatory. WALTER PYE.

ARTICLE 537.

Two Books on the Massage Treatment.

IN his *Handbook of Massage for Students and Doctors*, Dr. G. Hünerfauth (F. C. W. Fogel, Leipsic, 1887) first gives a history of this treatment as well as its physiological principles and technical details. He then deals with the application of massage in internal disease, surgery, gynæcology, eye and ear diseases, and cutaneous affections. The work will be welcomed as a compendium of all necessary information on the subject. The plates are particularly valuable, and the references to standard works copious.

Dr. A. Landerer, lecturer in Leipsic, has written a work called *Rules for the Treatment of Spinal Curvatures by Massage* (F. C. W. Fogel, Leipsic, 1887).—This is a precise guide for the relatives of scoliotic children, how to prevent curvature by massage. It may be useful to the medical man himself, and will certainly save him the trouble of giving the directions to his patients. The plates are a great aid to the comprehension of the treatment.

JOHN ELLIOTT.

NEW PREPARATIONS.

MESSRS. BURROUGHS, WELLCOME, AND CO.'S TABLOID TRITURATES AND ZYMINISED SUPPOSITORIES, SACCHARIN, &c.

WE have received a specimen of the tabloid triturates of Messrs. Burroughs, Wellcome, & Co. The triturates, which are intimate mixtures of the drug with sugar of milk, have of late years been gaining ground. In them the nauseous taste of drugs is effectually covered, while their therapeutic action is enhanced by reason of their extreme subdivision. The preparation of the triturates in the form of tabloids adds greatly to the ease and convenience of both dosage and administration. The tabloids break down and dissolve easily, and they constitute a very distinct advance in pharmacy, of which medical men with fastidious patients, or patients who are unable to take drugs in the crude form, will not be slow to avail themselves.

Messrs. Burroughs, Wellcome, & Co. also send us some samples of their zyminised (predigested) suppositories. They are of two kinds—of milk and of meat. These suppositories have lately come very generally into use, and appear to materially assist in affording nourishment at times when other methods are not available. They are ready for use at any moment, are easily introduced, and are more readily retained than enemata, provided care be taken to push them past the internal sphincter. The milk suppositories represent the nutritive value of five drachms of milk, and the meat suppositories half an ounce of fresh beef. Our own experience with them has been highly satisfactory.

We have also examined the sample of soluble saccharin from Messrs. Burroughs, Wellcome, & Co., and find it a very convenient preparation of this novel and useful substance. It is finely granular, readily soluble, and is moreover provided with a small measure fixed to the stopper of the very elegant little receptacle, which permits of proper dosage.

The Burroughs Duplicate Prescription Book is an ingenious application of the ancient 'manifold' to modern requirements. In a neat and convenient form, it enables the medical man, without any additional exertion, to preserve a copy of his prescription for future reference. As the books are issued at the nominal price of two shillings a dozen they should come into extensive use.

MISCELLANY.

REMEDY FOR WARTS.—Kaposi recommends 1 gramme of bichloride of mercury dissolved in 30 grammes of collodion. A little of the solution is painted on and around the base of the wart once every day.

THERE has appeared at St. Petersburg, at the office of the Hebrew paper *Hayom*, a work treating of the Osteology of the Talmud. The volume, written in pure Hebrew, is by Dr. Katzemelsson. Several pages are devoted to a controversy with Dr. Rabbinowicz, the French translator of the Talmud, on the sense of a text in the Mishna, of considerable importance from the point of view of the anatomical knowledge possessed by the ancient Jewish doctors.

MR. LEWIS, of Gower Street, will publish immediately the important volume of *Physiological and Pathological Researches*, by the late T. R. Lewis, M.B., F.R.S. (Elect), &c. The work is edited by Sir William Aitken, M.D., F.R.S., G. E. Dobson, M.B., F.R.S., and A. E. Brown, B.Sc., and contains 5 maps, 43 plates, including chromo-lithographs, and 67 wood engravings. The price is Thirty Shillings *nett*, and as only a very limited number of copies are for sale, and it will not be reprinted, those who wish to secure a copy of the work should order it at once from the publisher.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.

QUESTIONS SET AT THE EXAMINATIONS IN APRIL AND MAY.

TRIPLE QUALIFICATION.

Questions in Chemistry.

Four questions, all of which are to be answered.

I. How can the compound nature of light be proved?

II. Describe one method of preparing carbonic oxide gas, showing the equation. State its more important properties.

III. You are required to prepare 10 grains by weight of hydrogen, by acting on magnesium with dilute sulphuric acid: how many grains of each must be used? Give the equation.

IV. Give the formula of ordinary starch, and indicate the chief sources from which it is obtained. What change is produced when starch is—(*a*) heated to between 210° C. and 285° C.; (*b*) boiled with dilute sulphuric acid?

Questions in Elementary Anatomy.

All of which are to be answered.

I. Give a brief description of the coccyx.

II. Describe the posterior annular ligament of the wrist, and name in order the various tendons which pass under it.

III. What movements take place at the ankle joint? Name the muscles by which they are effected.

IV. Give the origin, insertion, and nerve supply of the biceps flexor cruris muscle.

Questions in Materia Medica.

Three questions, all of which are to be answered.

I. Where is filix mas found? What part of the plant is used in medicine? How is the extract made, and what is its dose?

II. To what order does gelsemium belong? Mention its preparations and doses.

III. Give the composition of three mercurial ointments.

Questions in Advanced Anatomy.

All of which are to be answered.

I. Describe the naked-eye anatomy of the medulla oblongata and pons Varolii.

II. Mention the naked-eye and microscopic characters by which you would distinguish between small and large intestine.

III. Describe the extrinsic muscles of the tongue, and give their nerve supply and action.

IV. Name the branches given off by the first part of the subclavian artery, and describe the distribution of the first branch.

Questions in Physiology.

All of which are to be answered.

I. Describe the course of the fibres of the pyramidal tracts from the internal capsule downwards to the exit of the anterior nerve roots from the spinal cord.

II. How and where is urea formed in the body? what is its chemical composition? how is it separated from the blood? and how much is excreted daily?

III. Describe the manner in which the image of an external object is formed on the retina, and explain how 'accommodation' for a near object is effected.

IV. Describe the movements of an ordinary respiration. What are the muscles engaged, and what the nerves that supply them? Where is the respiratory nerve centre, and what are its afferent nerves?

Questions in Medical Jurisprudence and Hygiene.

Four Questions, of which Three are to be answered, and in these III. *and* IV. *must be included.*

I. What are the actions of carbolic acid? What is a poisonous dose, the symptoms produced by it, and the treatment? What *post mortem* appearances may be found when it has been taken in excess by mouth?

II. What is meant by fœticide? Mention some of the methods of producing criminal abortion; the penalty accruing for effecting or trying to effect the same; and what would be the steps you would take if requested to examine and report upon a suspected case.

III. Mention the most important salts of lead from a toxicological point of view. Describe the symptoms of chronic lead poisoning, mentioning two ways by which it may accidentally gain access to the system, and how to prevent their occurrence. Give two tests for lead.

IV. What is meant by density of population, and how is it usually expressed? What would you consider the death-rate indicating a good sanitary condition of a town to be; and what condition of the population, in regard to age, may have a marked effect upon this rate?

Questions in Midwifery and Gynæcology.

Three questions must be answered, of which the last must be one.

I. Extra-uterine pregnancy: its classification and causes. State how its diagnosis is to be attempted.

II. Into how many stages is labour divisible? Describe what occurs in each, and, in normal labour in a primipara, their relative duration.

III. Should a woman suffering from uterine fibroid be allowed to marry? What may be the consequences to her if she marry?

IV. Give the symptoms and physical signs of retro-uterine hæmatocele, the treatment at onset, and also subsequently.

Questions in Medicine.

Three only of which are to be answered.

I. Enumerate and describe the important signs and symptoms which you would expect to find present in a typical case of typhoid fever at the tenth day of the disease. Write out full instructions for the treatment of the case at this stage of the disease.

II. Give the diagnosis of acute nephritis in the first stage of the disease; the dangers to be apprehended; and the treatment by which these might be averted.

III. Describe the characteristic abnormal muscular movements in each of the following diseases:—Paralysis agitans, multiple cerebro-spinal sclerosis, chorea, locomotor ataxia, athetosis.

IV. Enumerate the skin diseases included in the class neuroses. Give the pathology, symptoms, course, and treatment of herpes zoster affecting the trunk.

Questions in Therapeutics.

All of which are to be answered, including the Prescription.

I. How may the fœtor of breath in a case of bronchorrhœa be most effectively controlled, and the excessive secretion diminished?

II. Mention some of the most approved remedies in the treatment of hæmoptysis, and their mode of application.

III. What are the most reliable indications for the use of stimulants in a case of continued fever, and how should they be prescribed?

PRESCRIPTION.

To be written in unabbreviated Latin, the directions in English.

Prescribe an aperient containing calomel for a child of one year of age.

Questions in Surgery.

All of which are to be answered.

I. Give (1) the symptoms of dislocation of the lower jaw, (2) the method of reduction.

II. Describe (1) the different varieties of bursitis, and (2) the treatment suitable to each.

III. Tetanus—(1) What are its causes? (2) Distinguish it from strychnia poisoning and from hydrophobia.

IV. Polypus of the nose—(1) What are the varieties? (2) What sites do they respectively occupy? (3) Give the treatment of each.

Surgical Anatomy.

One of which only is to be answered.

I. Describe the relations of the peritoneum to the ascending, transverse, and descending colon.

II. Trace the course of the internal pudic artery, and mention its branches.

The London Medical Recorder.

ARTICLE 538.

BILLROTH ON THE TREATMENT OF BRONCHOCELE BY LIGATURES OF THE THYROID ARTERIES.

PROF. TH. BILLROTH publishes in the *Wiener klinische Wochenschrift*, No. 1, April 5, 1888, a paper entitled 'On the Ligature of the Thyroid Arteries with the view of producing Atrophy in Bronchocele,' in which he critically examines the feasibility and advantages of this operation, and illustrates it by his own cases.

Prof. Billroth assigns the merit of having resuscitated from oblivion and having successfully revived this operation to Dr. A. Wölfler,* late assistant surgeon at his clinic.

The extirpation of bronchocele, notwithstanding its very favourable results, has not fully realised the demands of modern surgeons for three reasons: (1) it is beyond our power and skill to prevent tetanus which frequently comes on after this operation; (2) it may happen even to the most careful operator to divide the recurrent nerve or to enclose it in the ligature; (3) in children, after complete extirpation of the thyroid gland, cachexia strumipriva not unfrequently follows.

Professor Billroth never met with cachexia in his cases, nor with very large bronchoceles in children. The youngest patient on whom he performed complete extirpation of the thyroid gland was 16 years of age. Of the operations which have been recommended to supersede the total extirpation (viz. the old method of intercapsular *évidement* of the single cystic tumours, the enucleation, the subcutaneous crushing, setons with incandescent wire, partial resections, &c.), the ligature of the arteries deserves the greatest consideration. As regards the eventual success of treatment by ligatures, gangrene will probably not occur, but a gradual shrinking of the gland will take place. There will always remain, after the ligatures of the four arteries, a number of smaller vessels, which will carry some blood to the bronchocele, partly from below and partly from the larynx, analogous to what takes place after the obliteration of the renal artery, when the small arteries which enter from the capsule into the kidney prevent sudden gangrene of this organ, but will not preclude its atrophy. Although this analogy seemed convincing, Dr. Wölfler nevertheless submitted it to the test of experiments on animals and man.

Atrophy, however, can only take place in adequately nourished living tissue. Whoever has had the opportunity of anatomically examining some hundreds of bronchoceles will know how very frequently large extravasations, chalky degeneration, cystic, grey, pulpy, jelly-like softening, fibrous shrivelled portions are met with in common goître. Such portions of bronchoceles in which necrobiotic degeneration has already taken place, and in which circulation no longer exists, will not be further affected by the ligature of the arteries. Whether the fluid contents of cyst can be resorbed after the operation is still an open question, which needs further investigation. It may therefore be inferred that signal success can only be expected in bronchoceles in which necrobiotic degeneration has either not yet commenced or only taken place in a very slight degree, as will be the case in rapidly growing goîtres of young people. In hard bronchoceles, on the contrary, which have already undergone chalky degeneration, the ligature of the arteries would be of no use whatever. The indications for this operation are, therefore, very limited.

The success of the operation will manifest itself in two ways. 1. These kinds of bronchoceles being extremely vascular, the first effect of the ligature of all the four arteries will be glandular anæmia; the tumour after the operation will be softer and smaller than previously. 2. The second effect will be found in the impaired nutrition; the scanty supply of arterial blood will not suffice to keep up tissue-life in the bronchocele; the vessels will become obliterated, the epithelium and the interstitial tissue will waste away, and only cicatrous connective tissue will remain.

Whether cachexia strumipriva will also result after complete atrophy of the thyroid gland, when produced by the ligature of the arteries in children, cannot be decided beforehand, but it is possible that this cachexia will not supervene, because the atrophy will only gradually, and after weeks and months, become completed; and the organism will therefore gain time to accustom and adapt itself to the absence of the thyroid gland.

If all the four arteries be tied, the atrophy will very probably be permanent, but not so if the circulation remains free in one of the main arteries or is rapidly re-established by the vasa vasorum, which latter causality has already been confirmed by experience. Permanent atrophy may be expected with confidence after the complete arrest of the circulation, the conditions brought about being very analogous to renal atrophy. If disintegration and decay of the epithelium of the thyroid gland have taken place, this organ will remain permanently atrophied; if, however, collateral circulation is established at an early period, bronchocele will form again. Professor Billroth recommends incisions at the external borders of the sterno-mastoid muscles as most convenient for tying the inferior thyroid arteries. He points out one circumstance which had nowhere yet been mentioned, viz. the excessive thinness and brittleness of the walls of the inferior thyroid artery. It happened to him in three instances that this artery gave way, once when raising and isolating it with the grooved probe, once when introducing the aneurysm-needle, and on another occasion whilst tying the ligature. Very profuse hæmorrhage in such an accident takes place, and the seizing of the artery which retracts behind the scalenus muscle is troublesome and difficult, but he succeeded in every one of these three cases in taking hold of the vessel, but not without considerable loss of blood; in one case he was obliged to divide the scalenus in order to secure the ends of the artery with a broad clamp. As a rule, in tying the arteries he places in their continuity two ligatures, between which he divides the vessel. In his later operations he employed, in

* A. Wölfler: *Die chirurgische Behandlung des Kropfes*, pp. 54, 55. Berlin, 1887. A. Hirschwald, *Die operative Behandlung des Kropfes durch Unterbindung der zuführenden Arterien. Wiener med. Wochenschrift*, No. 29,030. 1886. *Die Unterbindung der Arteria thyroidea inferior. Wien. med. Wochensch.*, No. 6, 1887.

consideration of the brittleness of the arteries, only one ligature. No secondary hæmorrhage took place in either of these cases. The operations by means of ligatures of very large bronchoceles are very difficult and full of intricacies, and the extirpation in most cases will be a by far easier proceeding.

Professor Billroth, up to the present time, has treated by ligatures four cases of common bronchocele, of which the following are the most important details:

Case 1.—An otherwise healthy housemaid, aged 25, had been troubled for ten years with a very slowly increasing bronchocele in the median line, which at the time of its first treatment, in April 1885, had the size of a large apple, and caused some respiratory difficulties. After twelve injections of pure tincture of iodine the tumour considerably diminished in size, and the difficulties of respiration ceased. About twelve months later the goître recommenced growing, and at the end of February 1887 had attained its former considerable size. On Feb. 25, 1887, both the inferior thyroid arteries were tied. Ligatures of the superior arteries were deemed unnecessary, the superior portions of both lobes of the gland appearing normal. Except the large median tumour, which had partially become substernal, and had caused tracheo-stenosis, as could be demonstrated by the laryngoscope, no other nodules were found. The first effect was most satisfactory, and the goître had entirely disappeared after four weeks, when the patient was discharged. But the result was unfortunately not permanent. In the beginning of May, little more than two months after the ligature of the arteries, the patient returned with the bronchocele as large as before the operation. Professor Billroth now intended to tie the two superior arteries, but the patient, after repeated previous imperfect treatments, insisting upon a radical cure, he enucleated the tumour on May 14. Perfect recovery took place, as usually, after twelve days.

Case 2.—A gamekeeper, aged 22, on his admission, on Dec. 14, 1887, stated that his throat had gradually become uniformly thicker since 6–7 years, and that he had only lately been inconvenienced by a somewhat more difficult and whistling respiration when running or climbing mountains. His neck appeared uniformly rounded in all its parts, so that neither the muscles nor the larynx were visible. A great number of larger and lesser nodules were grouped in such manner as to present the appearance of an equally diffuse hypertrophy of the thyroid gland. The laryngoscopical examination showed tracheo-stenosis at the height of the second tracheal ring from displacement of the windpipe to the left side. The ligature of the left superior thyroid artery and of both the inferior arteries was performed on Dec. 16, 1887, followed, on Jan. 7, 1888, by the ligature of right superior thyroid artery. Although after the first, and more so after the second operation the subjective symptoms had considerably diminished, only a very slight decrease of the thickness of the neck was externally visible. The patient was discharged with all his incisions healed, on Jan. 16, and presented himself again on Feb. 16. He breathes now without any difficulty when running or climbing. The laryngo-stenosis was still existing, but in a lower degree. The circumference of the neck, compared with its condition before the operation, had greatly diminished, but a considerable number of nodules could be felt by palpation. The result after a lapse of two months was imperfect, but as a gradual atrophy is still continuing, it is to be hoped that it will further proceed. It is also possible that in some of the nodules cystic or other kinds of softening are taking place, the resorption of which may be incomplete and accompanied by slow shrinking.

Case 3.—A scoliotic, ill-nourished tailor, aged 18, with a bronchocele of equal size and character as in Case 2. Ligature of all the four arteries on Feb. 4, 1888, in one sitting, with most signal success. At the time of the discharge of the patient on March 3, twenty-eight days after the operation, the bronchocele was completely atrophied, and the appearance of the neck was perfectly normal.

Case 4.—A powerfully-built Caucasian, aged 26, with an enormous bronchocele, which commenced growing in his third year of life. Both lobes and the isthmus were of extraordinary size. A great number of hard nodules, covered by immensely distended veins, were imbedded in the hypertrophied, everywhere strongly pulsating tumour. No tracheostenosis. Circumference of the neck 54 centimètres (21 inches). Ligatures of all four arteries were made in one sitting on March 5, 1888, immediately after which the bronchocele became softer, but without measurable decrease of its circumference. The incision healed by first intention in eight days. From the second to the sixth day slight icterus. On March 20, fifteen days after the operation, considerable diminution in size, circumference 48 centimètres (18½ inches), but the tumour still very large. No veins conspicuous on the neck, no pulsation, no murmurs. Many small nodules in the soft stroma of the bronchocele. The patient feels perfectly well, and still continues under observation.

Favourably impressed by the result of the ligatures in these four patients, Professor Billroth proposes to perform this operation in other suitable cases, and in future will always tie the four arteries in one sitting. The slight icterus in Case 4 soon disappeared, and may have been caused by resorption of blood.

As regards the disfiguring effects, which likewise claim some consideration, especially in young females, he points out that the ligature of all the four arteries will of course leave four scars, whereas after the extirpation, when performed according to his methods, only one lateral cicatrix will remain, which may easily be hidden by a small necklace. But of much graver importance is the disfiguring appearance of a lean neck in which the thyroid gland has been completely removed. The trachea and the sterno-mastoid muscles will form prominent ridges, enclosing a groove-like depression at each side of the wind-pipe, which with every inspiration will deepen in the most unsightly manner. The atrophy after the ligatures will never proceed so far but that remnants of connective tissue of the size of a small thyroid gland will be preserved, and they will satisfactorily fill up the grooves at each side of the trachea.

Professor Billroth considers the ligature of the thyroid arteries as undoubtedly a most valuable addition to the surgical treatment of common hæmatocele, and he asserts that this method would be an incalculable boon if it were equally efficacious in carcinomas and sarcomas of the thyroid gland. But we have been sufficiently taught, he adds, by the formerly more frequently employed ligatures of the lingual arteries in unextirpable carcinomas of the tongue that this so much desired result will

not be attained; rapid disintegration of the carcinomatous neoplasms, but no harmless wasting, takes place. Nevertheless we ought not to be disheartened and deterred from submitting to further trials this rational mode of treatment with any available modification, although the only attempt of his for this purpose completely failed.

Case 5.—The neck of a young woman, aged 26, was perfectly slender and normal until two months ago, when at the left side of the trachea a hard nodule formed in the thyroid gland, which rapidly increased in size. During the last days respiratory difficulties supervened, which exacerbated into dyspnœa, with attacks of suffocation. At the admission of the patient into the clinic on March 6, 1887, tracheotomy was immediately performed for asphyxia. On examination on the following day a hard but slightly movable painless tumour, of the size of a small apple, intimately connected with the trachea, was discovered. The trachea was so much bent to the right that its lumen was almost entirely compressed. Total extirpation of the tumour would most probably have necessitated the resection of a great portion of the trachea, of a portion of the larynx, and of the œsophagus, and of a part of the recurrent nerve. Such a mutilating operation, although possible without absolute danger of death, was too revolting to Professor Billroth; he therefore, on March 10, tied both inferior thyroid arteries. The operation had no immediate effect on the size of the tumour. The patient, who had already been very cachectic, rapidly sank, and died on the following day. On examination the tumour proved to be a medullary sarcoma.

Ligatures may possibly be of some benefit if resorted to in the earliest stage of sarcomatous or carcinomatous bronchocele. In such desperate cases even this last remedy ought to be attempted.

Ferd. Adalb. Junker, M.D.

Article 539.

STOERK ON SHOCK AFTER THE EXTIRPATION OF THE LARYNX.

The *Wiener med. Wochensch.*, No. 12, March 24, 1888, contains a paper by Dr. Karl Stoerk, professor of laryngoscopy at the University of Vienna, in which he analyses the causes of shock after extirpation of the larynx.

During the extirpation of the larynx, he states, frequently certain conditions of the heart supervene, from which, within a comparatively short time, death ensues. These conditions and their fatal consequence have hitherto been known by the name of 'shock,' a term, however, which on observation of, and comparison with, other analogous cases fails to explain the real causes of this lethal result, and ought therefore to be abandoned. By, and in consequence of, the total extirpation of the larynx, important changes in the functional conditions of the innervation of the heart are brought about, the anatomical and physiological investigation of which will explain the mysterious causes of the shock.

Professor A. W. Volkmann (*Lehrbuch der Physiologie*, chapter on *Herzthätigkeit*, Leipzig, 1850) has shown that the heart is richly supplied with ganglia, which alone suffice to keep up its motory action. He considers those ganglia as the central motory organ of the heart, and supports his opinion by the histological researches of Remack, Kölliker, and Ludwig, and by his own experiments on animals, by which he demonstrated that, under certain favourable circumstances, the action of the heart may continue for a considerable time after the complete removal of this organ and after division of its connection with the vagus. The motory action of the heart is maintained, besides by its ganglia, by a twofold nervous force, by a regulating, that is to say, retarding (*Hemmungsleitung*), and by an accelerating influence. The experiments of Moleschott, Schiff, and Gianuzzi have proved that even a feeble excitation of the vagus frequently accelerates the cardiac pulsation, and that in atropine and nicotine poisoning, by which the retarding fibres (*Hemmungsfasern*) of the vagus are paralysed, irritation of this nerve will likewise produce acceleration of the action of the heart.

Bezold (*Ueber die Innervation des Herzens*, 1863) infers from his researches that the vagus, in its totality, acts as a genuine antagonist to the accelerating influence of the cervical portion of the sympathetic nerve. Although the view that the function of the whole vagus manifests itself merely in its retarding or depressing influence has been much assailed, the opinion of Bezold that all the accelerating or exciting filaments exclusively originate from the sympathetic nerve is still at present accepted.

The communicating branches of the thoracic portion of the sympathetic nerve coalesce into a loop to the third inferior cervical ganglion, and to the seventh and eighth cervical nerves known by the name of *Ansæ Vieussenii*, which, by its connection with one or two branches of the cardiac nerve, forms the nervus crassus or medius and merges into the cardiac plexus. The majority of experimentalists localise the acceleration of the cardiac action in this plexus. Stricker's and Wagner's researches (*Untersuchungen über die Ursprünge und Funktionen der beschleunigenden Herznerven*; vol. lxxvii. of the *Transactions of the Imperial Academy of Sciences in Vienna*) substantiate those of Bezold and maintain that electric excitations of the ansa and of the vagus produce phenomena of interference between the accelerating and the retarding branches, whereby it must be borne in mind that the vagus, which soon becomes exhausted, will not always manifest the depression as precisely as the irritation of the ansa its accelerating effect. They accept the experiments of C. Ludwig and Schmiedeberg (*Arbeiten an der physiologischen Anstalt zu Leipzig*, 1871), who produced acceleration of the pulse by irritation of the ansa as a convincing proof that this acceleration caused by irritation of the ansa is as distinct a phenomenon as the retardation of the pulse brought about by irritation of a peripheric stump of the vagus.

The antagonism which keeps up the balance of the motion of the heart being proved, it is of still greater importance to ascertain whether the vagus in its totality acts as a depressor, as alleged by Ed. Weber (in Wagner's *Handwörterbuch der Physiologie*, 1864), (who discovered the retarding filaments of the vagus, and observed after their division an accelerated rhythm of the cardiac action, and again retardation after irritation of the peripheric stumps of the divided vagus), or whether only single filaments of this nerve are endowed with this specific property. Waller's experiments (*Gazette médicale de Paris*, 1856, No. 27) elucidate this question. He separated in rabbits the fibres of the *accessorius Willisii* high up at the jugular foramen,

where they are inclosed in the sheath of the vagus, and he found that no retardation of the cardiac action was evolved by division of the vagus. Schiff (*Lehrbuch der Physiologie*, 1859) repeated the same experiment, in which the division of the vagus after destruction of the accessorius filaments was followed by acceleration of the cardiac action.

These experiments prove the high origin of the regulating fibres from the superior portion of the vagus—a fact which is confirmed in Hyrtl's, Langer's, Luschka's, and Holstein's standard works on anatomy, according to which the superior cardiac nerve originates, besides the superior laryngeal nerve, from the superior portion of the vagus. We read, moreover, on page 120 of L. Hirschfeld and J. Leveiller's *Neurologie, ou Description et Iconographie du système nerveux et des organs des sens de l'homme, avec leur mode de préparation* (Paris, 1853, J. B. Baillière), under the heading 'Le Nerf Cardiaque Supérieur,' plates 34, 35, 36, as follows :—'Immediately below the laryngeal nerve, sometimes much lower, the superior cardiac nerve comes in view, which, passing downwards and obliquely inwards, crosses the common carotid and terminates in the cardiac plexus, either directly or by communication with other cardiac nerves.' Besides this Hirschfeld and Leveiller describe, p. 21, under *La branche cardiaque*, a cardiac nerve, which arises from the recurrent nerve after the latter has passed at the left side upwards below the aortic arch, and at the right side below the clavicular artery.

We find also a representation of this nerve in the same work of Hirschfeld and Leveiller—*i.e.* of the cardiac branch—which arises in immediate proximity to the superior laryngeal nerve, accompanies this to the greater horn of the hyoid bone, perforates the hyoid-thyroid membrane, and proceeds on the side of the larynx along the trachea to the cardiac plexus. There is also a drawing of a communication of the cardiac branch to the recurrent nerve, from which a thick nerve branch passes directly to the cardiac plexus. Luschka, in his *Anatomie des menschlichen Halses* (*Anatomy of the Human Neck*), 1862, p. 394, states :—'In one body, which I dissected, the superior cardiac branches arose from the origin of the superior laryngeal nerve.' Brücke (*Vorlesungen über Physiologie*, vol. ii. 1873) and Landois (*Lehrbuch der Physiologie des Menschen*, 1887) give the same description :—'The cardiac plexus is composed of the proper cardiac branches of the vagus, and of branches of the superior and inferior laryngeal nerves.'

All the experimental divisions of the vagus have hitherto been performed with the view of investigating the consecutive alterations of the lungs, and all the inferences from those experiments, especially since Traube's researches and Otto Frey's prize essay, tend to prove that the lungs suffer in consequence of the division of the vagus such pathological changes that the animals perish of a form of pneumonia analogous to that caused by the presence of foreign bodies. All the investigations since Traube, Frey, Rosenthal, and other experimentalists, were principally intended to ascertain the cause of the death of the animal, without special regard in any instance to the action of the heart. We find only one single allusion to the effects on the cardiac action in Otto Frey's work (p. 161), and quoted by Heidenhain (p. 115), that after the division of the recurrent nerve, sudden death of the animal took place, from which it may be concluded that the fatal result was caused by paralysis of the heart. The only direct informations on the alterations in the heart after division of the vagus are found in Eichhorst's *Die trophischen Beziehungen des Nervus Vagus zum Herzmuskel*, 1879. Eichhorst experimented on mammalia (rabbits, dogs, &c.), and still more frequently on birds, and demonstrated that besides tumultuous cardiac action, as early as two days after the division of both vagi, fatty degeneration of the cardiac muscles commenced which rapidly led to paralysis (*i.e.* death) of the heart.

From the examination of anatomical preparations of the vagus, and of the laryngeal and pharyngeal plexus, from which nervous branches ramify directly downward, and all of which form oblique communication, it will be difficult to demonstrate which of these filaments in their non-isolated course may induce depression of the action of the heart ; but the frequent coincidence that the cardiac branches rise high up with the superior laryngeal nerve and take a downward course, leads to the inference that in certain cases the anterior branches, the arrangement of which may be compared with that of the strings of a harp, correspond to the cardiac depression. Cyon and Ludwig succeeded in demonstrating, as a well-ascertained fact in rabbits, dogs, cats, and lambs, a specific depressor nerve, which rises with two roots from the vagus and superior laryngeus, or, in exceptional cases, only from the superior laryngeus. Cyon especially (*Bull. de l'Acad. de St. Pétersbourg*, 1869) found such a nerve in the horse, which he could prove physiologically and by direct experiments to be a depressor.

All these anatomical and physiological evidences and experiments show that some of those nerve filaments, the function of which is the depression, *i.e.* regulation of the cardiac action, branch off from about the middle of the tract of the vagus, and descend along the larger blood-vessels, and that others of these retarding filaments originate with and from the laryngeal nerve, and that all of them pass to the larynx and proceed downwards along the trachea to the heart. That being the case, the cardiac branch must unavoidably be cut through during the complete extirpation of the larynx or its partial ablation far backwards, in which the fold which forms the entrance of the pharynx will also be divided. It therefore will be evident that by the division of the cardiac nerve its function as a regulator of the cardiac action and the antagonism of acceleration and depression must be annihilated. This explains the cause of the tumultuous cardiac action which frequently arises during and after the extirpation of the larynx, and which within forty-eight hours becomes fatal by paralysis of the heart. That these cardiac disturbances will not invariably take place in every case is explained by anatomical examinations, which have shown that in some rare instances the cardiac branch passes differently along the larynx.

These observations will undoubtedly instigate observers to detailed researches regarding the feasibility and the best methods of isolating the regulating innervation of the heart. In the meanwhile it is of importance to emphasise the greatest precaution in separating the larynx from the pharyngeal fold, and the necessity for the operator dissecting close to the cartilages in order not to injure the nerves, the more so as it will be but rarely neces-

sary to divide the nerve branches which enter near the superior horn of the thyroid cartilage. By cautiously enucleating the larynx at this place the disastrous consequences of the division of the cardiac nerve may be prevented. In the above-named variety of the cardiac nerve too may also be found the explanation why no cardiac symptoms arise in some extirpations of the larynx.

FERD. ADALB. JUNKER, M.D.

ARTICLE 540.

TUCZEK ON THE NERVOUS DERANGEMENTS IN PELLAGRA.*

THIS paper was originally read in the sixtieth *Versammlung deutscher Naturforscher und Aerzte*, and the following is a brief summary. Pellagra, called in old times 'mal de la miseria,' is generally ascribed to the excessive use of maize as an article of food, and presents remarkable resemblances to ergotism in its psychic, motor, and trophic disturbances. The utmost confusion reigns in the pathology of the subject, no two pathologists giving the same *post mortem* appearances, and the author finding the literature of the subject of very little use, travelled in the North Italian provinces, and observed 300 cases, the clinical histories of all which were placed at his disposal.

The disease, which has yearly relapses and exacerbations, may extend over fifteen or twenty years, and may begin at any age. The symptoms at first appear in spring, with gastro-intestinal disturbances, muscular weakness, and general depression; erythema is then common over exposed parts, and is followed by desquamation. The patient gets well apparently, but next year the symptoms recur, and disturbances of the nervous system now come into the foreground. Gradually the disease may become chronic, in this case a 'pellagra-insanity' develops, the pellagrous cachexia is fully manifest, which may last many years, and finally death results. But the disease is curable in the early stages, and places of resort for these patients are now established. In such a place (termed a 'pellagrosajo') in Treviso the author saw fresh cases in children and adults of both sexes. The symptoms were mainly anorexia, digestive disturbances, lassitude, mental depression, and irritability, occipital headache, vertigo, and the pellagrous exanthem. In a later stage the 'globus' sensation was frequently complained of, a symptom often causing confusion of this disease with hysteria. The chief psychic disturbances belong to melancholia, deepening into stupor, but there may be several yearly cures and relapses before permanent insanity follows. Many cases of so-called 'typhus pellagrosus' might be placed under the melancholic form of acute delirium. Delusions of various kinds, often of a religious character, are very common even from the first appearance of the nervous symptoms, and the patients may be dangerous to themselves and others. A few patients were maniacal; none showed paranoia. Attacks of vertigo were common, and occasionally contractions of various limbs, as in cortical epilepsy, but they always remained local. Among the spinal symptoms were paræsthesia in various situations, the 'globus' sensation already mentioned, pains in the occiput and neck, and a very distressing sensation of burning in the skin.

Motor disturbances were shown by increased resistance to passive movements, spasms, painful cramps, and in a few advanced cases contractures of the extremities. Muscular weakness, as evidenced by the dynamometer, was to be distinguished from mere subjective lassitude. The knee-jerk was increased in about two-thirds of the 300 cases, even to decided clonus. Twenty-three of these cases showed also foot-clonus, and increased tendon reflexus of the upper limbs. The muscular weakness when associated with increased tendon reflex, contracture, and a spastic gait, recalled the clinical picture of spastic spinal paralysis, but the converse did not hold; in other words, in the cases in which the knee-jerk failed no ataxia gait was present. Vaso-motor disturbances are shown by a general contracted condition of the cutaneous vessels, the skin being pale and cold. *Cutis anserina* was seen occasionally, but never local ischæmiæ or mydriasis.

To the *trophic* disturbances belong the skin derangements peculiar to the disease, and indicated by its name pellagra, derived from *pellis agra*, a rough skin. But one must travel in the spring of the year to see the pellagra exanthem properly. There is erythema of exposed parts, chiefly the backs of the hands, followed by profuse desquamation of the large kind. After several years pigmentations are left, with loss of elasticity, disappearance of sub-cutaneous cellular tissue, white cicatrices (like 'striæ gravidarum'), and in extreme cases a parchment character of the skin. These alterations of the skin cannot be due to the sun's rays, for the sun has always shone in Italy, but the above changes have only been noticed in medical literature since pellagra has been studied. The cutaneous signs may be absent altogether.

The author never found local myotrophies, and in this differs from Neusser (*Die Pellagra in Oesterreich und Rumänien*, Wien, 1887). Pellagra is very like ergotism, as in both there is gastro-intestinal disturbance, followed by cerebro-spinal symptoms and cachexia. The kind of psychosis and tendency to stupor is the same in both. But while the spinal symptoms of ergotism point to an affection of the posterior columns, those of pellagra, though not exclusively, indicate a lateral origin. Nothing definite has hitherto been revealed by *post mortem* examinations. Déjérine found degenerative changes in cutaneous nerves of the back of the hand in two cases, but such cases require care in their interpretation. Abnormal pigmentation of the ganglion cells of the anterior cornua have been often found, and corpora amylacea are frequent in the spinal cord. But the latter has never been thoroughly investigated. Tonnini, however, has made a beginning (*Disturbi Spinali nei pazzi pellagrosi, Rivista Sperimentale di Reggio*, ix., x.).

By the kindness of Italian colleagues the author made four *post mortem* examinations himself, and was present at four others. In all eight the spinal cord was affected, in two only the posterior columns, in six the posterior and posterior-lateral columns were diseased. The degeneration of the posterior columns affected the median portions and spared the entry of the nerve-roots; of the other cases the pyramidal lateral columns were chiefly affected. There was a normal amount of fibres in Clarke's columns. The ganglion-cells of the anterior horns showed increased pigment as a rule, but in one case there was pigment-atrophy.

These appearances do not explain the origin of

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* DR. FRANZ TUCZEK (Docent).—(*Deutsche med. Wochensch.*, 1888, No. 12.)

pellagra, but they favour the intoxication theory ; and pellagra appears to stand between ergotism, which affects the posterior columns, and lathyrism, which affects the lateral columns. We now have the term 'maïdismus,' or psychoneurosis maïdica, as Verga jun. would call pellagra.

E. J. EDWARDES, M.D.

ARTICLE 541.

POUPINEL ON MIXED OVARIAN TUMOURS.

DR. POUPINEL has recently published a series of observations made in the histological laboratory of the Collège de France on a large number of ovarian cysts, chiefly from the practice of Dr. Terrier.* He has found that ovarian cysts may exhibit every grade between the pure dermoid and the pure mucoid multilocular, or common ovarian cyst. These grades constitute what he terms 'mixed ovarian tumours.' The epithelial lining of the purest mucoid cyst is extremely variable, it may be cylindrical, cubical, goblet-celled, metatypical or even ciliated. Dr. Poupinel has seen three cases where the epithelium was entirely ciliated. [He says nothing, throughout his paper, of papillomatous or hilum-cysts. Ciliated epithelium is strongly suggestive of an origin from the Wolffian tubules which are found in the hilum and which stray sparingly into the parenchyma in our species ; hence, in the reporter's opinion, the occasional presence of papillomatous amidst mucoid or glandular cysts.—*Rep.*] Sometimes the epithelium is mixed. In mixed ovarian tumours, the epithelial lining of the cysts may be yet more varied, that is, cubical, goblet-celled, polymorphous, ciliated, stratified, or truly epidermic. In some cases the cyst is partly lined with skin bearing hair and sebaceous and sudoriparous glands, partly with uniform or polymorphous epithelium. Lastly, in dermoid cysts the lining of the cyst is, as a rule, purely cutaneous. Sometimes it is mixed with what appears to be true mucous membrane. The stroma or intercystic material in multilocular cysts is, as a rule, entirely made up of young, perfect, or myxomatous connective tissue. Both bone and cartilage may develop in the stroma. In the mixed ovarian tumours osseous and enchondromatous deposits in the stroma are not so closely connected with the neighbouring secondary cysts, as are similar formations in pure dermoid tumours. Lastly, the stroma may contain plain or striated muscle-cells or nerve tissue (teratoma of Virchow, Lebert's third variety of ovarian cyst). All the above-named conditions may be bilateral. Brodowsky has found ciliated epithelium in a pair of ovarian cysts. On the other hand, one ovary may form a mixed cyst, the opposite a mucoid or dermoid cyst. Dermoid cysts may become cancerous or even sarcomatous (Unverricht), or colloid (Cruveilhier).

Thus Dr. Poupinel endeavours to establish, by demonstrating gradations, the identity (in origin at least) of dermoid cysts and common ovarian multilocular tumours. The former are cysts lined internally with skin, which may bear epidermic appendages, and glands found in connection with normal skin. The common multilocular cyst is lined with what must be considered, to all intents and purposes, as mucous membrane, which secretes a mucoid fluid, and which may bear involutions representing glands. In other characters, Dr. Poupinel adds, the two varieties of tumour are similar. Thus mucoid cysts may give rise to so-called secondary deposits. Evidence has been brought forward to prove that dermoid cysts may do the same. In Fränkel's two cases there was probably rupture of the ovarian cyst and implantation of dermoid elements on the peritoneum. Kolaczek's case is not absolutely clear ; the surface of the ovarian cyst was smooth and entire, quite different from the small piliferous cysts found in the peritoneum. Mr. C. H. Moore's case (*Transactions of the Pathological Society*, vol. xviii., 1867, p. 190) is of high interest. There was evidence of rupture of the main cyst, or the cyst may have developed pedunculated secondary growths, the pedicles afterwards undergoing atrophy. The late Mr. Moore believed that rupture of the main cyst explained the secondary deposits. ['The rupture of an ordinary ovarian cyst usually causes a fatal peritonitis ; but a dry cyst, such as these, would produce mischief in its bursting, which might be limited and consistent with recovery. Such peritonitis had occurred in the present case.' Thus wrote Mr. Moore in 1866. Further experience has proved that rupture of an 'ordinary ovarian cyst' may only give rise to trifling symptoms. The accident may also cause dissemination of glandular growths, or of secondary cysts. In this respect the multilocular may resemble the dermoid ovarian tumour, for in both forms rupture may disseminate the intracystic growths ; but whether true metastasis occurs in either is doubtful. Again, in both forms, I believe, exogenous cysts, or secondary cysts which protrude from the main wall of the tumour, may become detached and adhere to omentum or intestine.—*Rep.*]

Dr. Poupinel finds, in accordance with previous authorities, that the mucous (or common multilocular) cysts are most frequent in adult life (from 35 to 45). The mixed forms appear between the ages of 15 and 25. All three types are said by Dr. Poupinel to be rare in childhood, but, relatively, dermoid tumours are then common. [Indeed, nearly all the ovarian cysts which have been removed from patients under puberty have proved to be dermoid. In the fœtus, ovarian cysts may be papillomatous, or even, as I have recently seen, malignant. Winckel figures in his text-book an adenomatous ovarian tumour, and simple follicular cysts are very common in the fœtus.—*Rep.*]

Dr. Poupinel rejects learned hypotheses on the origin of dermoid cysts. They are not more mysterious in their nature than common multilocular cysts ; the former develop skin, the latter mucous membrane, and mucous membrane is as wonderful as cutis and epidermis. ALBAN DORAN.

* *Archives de Physiologie Normale et Pathologique.* Troisième Série. T. ix.

ARTICLE 542.

BEHREND ON ANTHRAROBIN AS A SUBSTITUTE FOR CHRYSAROBIN AND PYROGALLIC ACID IN THE TREATMENT OF SKIN-DISEASES.

PROFESSOR LIEBERMANN, of Berlin (*Viertelj. für Derm. und Syph.*, Heft 1, 1888) handed over to Dr. Behrend a substance named anthrarobin, which, from its chemical composition, he thought likely to have an action similar to that of chrysarobin. This

substance is an odourless, yellowish-white powder which, applied to the mucous membrane of the nose, produces a peculiar burning sensation. It can be used as an ointment with lard or lanolin, after being preliminarily rubbed up with olive-oil. It is little soluble in water, but very soluble in solution of borax or alcohol, being soluble in ten parts of cold alcohol and five parts of boiling alcohol. It is soluble in ten parts of glycerine at a temperature of 100° C., and mostly remains in solution.

The following formulæ are given :—

℞ Anthrarobin, 5.0 ; ol. olivarum, 10.0 ; axungiæ porci, 35.0.

℞ Anthrarobin, 5.0 ; ol. olivarum, 15.0 ; lanolin, 30.0.

℞ Anthrarobin, 10.0 ; boracis, 8 ; aq. dest., 80.0.

℞ Anthrarobin, 20.0 ; boracis, 35.0 ; spirit, glycerine, āā 90.

In all these formulæ anthrarobin was well borne ; symptoms of irritation such as those observed after the use of chrysarobin were never observed, both the ointment and the tincture having been employed on the face without a trace of œdema or inflammation of the eyelids or conjunctiva. It stains the skin yellow, but, unlike chrysarobin, the staining does not extend beyond the part to which it is applied. It produced a moderate sensation of burning, which lasted in some cases only a few minutes, in others several hours, but was never so severe that it could not be easily borne by children.

Like chrysarobin it stains linen. Dr. Behrend has used it in all the cases of skin disease in which chrysarobin has been successfully used—namely, in fifteen cases of psoriasis, seventeen of herpes tonsurans, two of erythrasma, one of pityriasis versicolor. The alcoholic tincture was much more efficacious than the ointment, and had the advantage that the skin dried immediately after the application, and the linen was less stained.

The action was much strengthened, if, before the application of the anthrarobin, the affected skin was rubbed with alcoholic solution of soft soap or with soft soap in substance. Taken as a whole, the action was less energetic than that of chrysarobin, so that the cure was somewhat slower. On the other hand, the greater tolerance of the skin more than compensated for the longer duration of the treatment.

Of fifteen cases of psoriasis treated three ceased to attend after the disease had advanced towards a cure. The other twelve were observed until a cure was completed. Some of these patients were treated by an ointment and some by tincture, which, after the scales were removed, were frequently rubbed in with a hard brush or with wadding, and recent eruptions disappeared after four or five rubbings, older eruptions requiring ten, twelve, or even more.

In two patients comparative trials were made, one part of the body being rubbed with anthrarobin, and the other with chrysarobin. The side which was rubbed with chrysarobin was cured by seven rubbings, whilst additional rubbings were required on the other side before a cure was completed. It has been found that in the treatment by chrysarobin and goa powder the inflammation of the skin set in more quickly and more intensely, the more patients were treated by soap. For this reason Behrend has in using chrysarobin avoided washing with soap, and rather caused a little acetic acid to be added to the ointment to limit its action. This led him to use soap with anthrarobin, by which the curative action was greatly increased. The explanation of this fact is to be found in the observation made by Liebermann that the oxidation to which this action is due took place more quickly in the presence of alkalies. Soap cannot be added to the ointment, otherwise the anthrarobin becomes oxidised and inert. Of the cases of herpes tonsurans only one was a case of ringworm of the scalp, and this case is dismissed with the simple observation that the disease was cured without the development of kerion. He treated two cases of erythrasma, a disease which he had previously shown to be very amenable to treatment by chrysarobin, and a cure was obtained after about ten rubbings. Dr. Behrend concludes that anthrarobin works more slowly than chrysarobin, over which it has undoubted advantages, while in quickness of action it exceeds that of pyrogallic acid, and in consideration of the injurious effects that have been produced on the general organism by pyrogallic acid, he considers that anthrarobin takes its place as a most desirable substitute. Further, it is cheaper than either chrysarobin or pyrogallic acid.

G. THIN, M.D.

ARTICLE 543.

REVINGTON ON THE NEUROPATHIC DIATHESIS, OR THE DIATHESIS OF THE DEGENERATE.*

DR. REVINGTON defines the law of latency as follows :—A diathesis may be transmitted through a generation without giving outward and visible sign of its existence, and may appear in full vigour in the next ; or a strong neurosis may manifest itself in the intermediate generation by a temperament, and in the third break out. Sometimes, under favourable circumstances, the neurotic diathesis is eradicated by the vigorous growth of the stock.

The influence of a neurosis under favourable circumstances, such as a regular temperate life, without accident or worry, may be postponed, and only manifest itself as premature senility, the individual breaking down when he has spent his limited stock of nerve energy.

Any one of the forms of neurotic manifestation may alternate with any other in the life of the individual. For example, spasmodic asthma has been described by Dr. Savage and Dr. C. Norman as alternating with insanity. In a much larger number of cases we find a discontinuous neurosis which varies the forms of its manifestations with the critical epochs of life. The daughter of a degenerate stock at the crisis of puberty, or of the adolescent period, may have an attack of chorea, hysteria, or epilepsy, and we may hear that she has had a sharp attack of convulsions in infancy. Later in life she may break down in any of the crises of maternity, and have an attack of the insanity of pregnancy, or of the puerperal or lactational periods, or she may, perhaps, keep well until the climacteric crisis.

Any one of the forms of neurotic manifestation may represent any other in the life history of the family. For example, insanity in the parent may be represented by imbecility or epilepsy in the child, or by epilepsy in one child and insanity in another.

The influence of either parent for health or for disease may be prepotent in the offspring ; that is, the form in which the neurotic diathesis manifests

* *Journal of Mental Science*, April 1888.

itself may be determined by the superior influence of one or other parent.

An identical tendency, such as to suicide or to break down at a certain age, may be inherited. Trousseau mentions a case in which the great-grandfather, grandfather, father, and son all suffered from progressive muscular atrophy.

A slight neurotic inheritance connotes a ready breakdown and a rapid recovery. The ease with which a slight disturbance upsets the balance is correlated with the ease with which the pendulum swings back. Of course, the existence of a neurosis connotes therefore relapse—that is, another ready swing of the pendulum.

A strong neurotic inheritance may mean an early and complete breakdown, and a hopeless, useless, non-reproductive existence ; in other words, the extinction of a bad stock.

Epilepsy is one of the commonest forms which the neurotic diathesis takes when it expresses itself early in the life of the individual.

The influence of hereditary and acquired neuroses in the production of general paralysis is evident to all who have studied these important tendencies.

[This paper is pregnant with suggestive illustrations of the points above enumerated. It would be interesting to find out to what extent a nervous disorder is likely to predispose the individual to some more serious form of disease, or to be transmitted to his offspring. For instance, would stammering, tic non-douloureux, facial spasm, involuntary twitching of the shoulders, peculiarities of gait, and such minor neurotic phenomena be dangerous either to the individual or his children ?

Again, it would be most interesting to ascertain the effects of accidents in individuals upon the future of their descendants. For instance, a girl is stunted in growth, yet not deformed. This abnormality was undoubtedly due to the mother having packed a trunk when she was pregnant, the stooping position involved in this action having, as it were, crushed the child in utero. Should such a girl marry ?

If it were not for the fact that neuroses die out in generations under favourable conditions the human race would long ago have become extinct.—*Rep.*]

HENRY SUTHERLAND, M.D.

ARTICLE 544.

LE GROS CLARK AND OTHERS ON EVOLUTION AND AFFINITY IN DISEASE.

PROMINENT attention seems to have been given lately to some important matters showing the bearing of the general principles of biology on the domain of pathology, and we have the special works of Mr. Mitchell,* Mr. Roger Williams,† and the works of Mr. Bland Sutton,‡ and Ziegler ; § but among the more scattered papers on the subject, we notice two by Mr. Le Gros Clark, viz. in the *Journal of Anatomy and Physiology*, vol. xxi.,‖ and in the *British Medical Journal*.¶

The first of these two papers includes the consideration which is more limited in the second, and is on the whole of more general bearing. The evolution of disease in its more complicated forms from those of more simple type may give the clue to the process of removal by what may be called 'devolution.' It will be seen by a reference to the practical deductions or 'implications' of Mr. Mitchell's work reviewed in this number of the LONDON MEDICAL RECORDER, that a philosophical reasoner arrives at the same conclusions as the scientific experienced surgeon as to the utility of studying pathology from the scientific standpoint of Herbert Spencer's principles. Mr. Le Gros Clark here says :—'It is by patient observance of the progressive steps by which various pathological changes are developed, and the retrogressive steps by which a healthy condition is restored, that we may hope to frustrate or modify the former, and to facilitate the latter ; possibly in time even to banish many diseases which are now prevalent.'

The object of his paper is to support the following propositions : (1) that there are affinities between diseases which, though remote, may be traced ; (2) that the divergence from a simple type, and the resulting variety in disease, are due to evolution ; (3) that such evolution is influenced or determined by environment, hereditary or accidental, or acquired idiosyncrasies ; (4) that the principle of reversion to original type is a valuable guide in the treatment of disease.

He commences his paper, after stating these propositions, by taking the example of venereal disease, in which he supports the views expressed by Travers,* who was his master, and maintains that the severer and more complicated forms of the disease are directly related to the simplest, and that there is no definite line between them, 'the gradations between the extremes being many and determined by circumstances both personal and extraneous, in which the susceptibility of the recipient as well as the quality of the virus plays an important part.' This hypothesis we cannot but think would bear supporting by clinical observations, for it is to some extent the old contention between the two schools of surgeons who upheld the unity or duality of the venereal poison. But there is much in this paper beyond the well-worn discussion, and we are struck by many suggestive remarks. 'What happens in the interval between infection and development ? Is the local activity the manifestation of reaction, or is the constitution unimplicated until after the localised poison is matured ?' 'Is it not the rule, subject to exceptions, that the severer the attack in most infectious maladies, the greater the security' against a second invasion ? He is inclined to think that, in syphilis at least, the length of the period of incubation is proportionate to the severity of the attack. The explanation of prophylaxis is considered, but this is not much clearer now, though a special paper on the subject has recently appeared by Mr. Dowdeswell.† Why is it that certain germs and some animal poisons act by direct absorption into the circulation, but are harmless when swallowed ? whereas others seem to act specially through the medium of the intestinal canal ? And what analogy is there between the diseases of vegetables and animals ? These are subjects which will have to be worked out by others, and we see them occupying the attention of many earnest workers.

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* *Dissolution and Evolution and the Science of Medicine* (see p. 260).
† *Principles of Cancer and Tumour Formation* (see p. 262).
‡ *General Pathology, Evolution and Pathology.*
§ *Pathological Anatomy and Pathogenesis.*
‖ 'Some Thoughts on the Evolution and Affinity of Disease.'
¶ 'Some Remarks on the Venereal Disease, chiefly in Reference to its Evolution.'

* *Observations on the Pathology of Venereal Affections.*
† *Lancet*, April 14 and 21, 1888.

In this paper Mr. Le Gros Clark further examines how far the phenomena of other diseases besides syphilis support the propositions he started with, and he takes separately and shortly the subjects of inflammation, morbid growths, fevers, cholera, erysipelas, rheumatism, gout, and influenza. A few final and thoughtful words contrast the evolution found or suggested in pathology with that which may be traced in moral deformity or disease, and these will be read with more than ordinary interest. A quotation, too, from Sir Thomas Watson on the evolution of disease shows that that careful observer was alive to the possibility and probability of diseases of a contagious form having had origin in those of a simpler type. No doubt many thoughtful observers have seen the probability of the doctrine of evolution, but it has been reserved for the present day to have them generally accepted and applied.

W. W. WAGSTAFFE.

ARTICLE 545.

ALTDORFER ON THE HOT-AIR BATH IN RELATION TO PTOMAINES AND LEUCOMAINES.

IN the *Med. Press and Circular*, May 1888, p. 452, Dr. Altdorfer contributes an excellent paper on the hot-air bath in relation to ptomaines and leucomaines. The theory now generally accepted is that the symptoms in most specific diseases are immediately due to animal alkaloids (called ptomaines), developed through the agency of a specific bacillus. Professor Brieger, in his latest experiments, has now defined the chemical constitutions of the ptomaines, elaborated by the bacilli of tetanus and other maladies. The ptomaines seem to be very useful to the bacteria in their struggle for existence with the living tissues, as the formation of poisonous products by the bacteria may enable them to destroy the leucocyte (or tissue cell) instead of being themselves destroyed. Gautier has shown that animal alkaloids, deleterious to the animal economy, are also a necessary product of vital physiological processes, which class of organic bases he has called *leucomaines*, to distinguish them from the above-mentioned *ptomaines* (produced by bacilli). There is considerable discussion on this subject, and it has not been demonstrated whether diseases are produced by bacterial ptomaines, or by physiological leucomaines; but it is generally admitted that the ptomaines and leucomaines are not distinct or opposed to each other; that it is, on the contrary, impossible to trace the limits where the one series of alkaloids begins or the other ends. The next question to consider is to find out how to utilise this knowledge of the animal alkaloids in the treatment of diseases. Whenever there is, under pathological conditions, excessive elaboration of the animal alkaloids, either by the tissue cells (leucomaines) or by bacilli (ptomaines), the best plan to destroy these deleterious substances will be to imitate the ways of nature as far as possible; this is to increase the physiological eliminations and oxidations. In the hot-air bath we have a valuable method of increasing the absorption of oxygen into the blood, and, therefore, of assisting the cells in their struggle with bacteria by destroying the ptomaines. Additional advantages of this bath are that the blood, after the loss of a great quantity of water, is more concentrated and therefore allows the blood-corpuscles, charged with oxygen, to come into closer contact with the microbes, and further that, similarly as in fever, the activity and movement of the amœboid cells are much increased by the somewhat raised temperature of the blood. The author describes the method of administering this treatment, and concludes by stating the views he holds. 1. That the specific diseases (cancer included) are caused by some virus, either produced by bacteria, or by the cells of the body. 2. That the excessive production of these morbid substances may be counteracted by increased oxidation and elimination. 3. That the hot-air bath is the best method of increasing oxidation and elimination.

RICHARD NEALE, M.D.

ARTICLE 546.

EVE ON ACTINOMYCOSIS.

IN the *Practitioner*, May 1888, Mr. Frederic Eve gives some interesting examples of cases of actinomycosis. This disease belongs to the large group known to pathologists as the infective granulomata, the infective element being a peculiar vegetable fungus, the growth and distribution of which are associated with tumours formed of granulation-tissue. The fungus gains access to the body by means of a lesion of some mucous membrane or of the skin. A primary tumour is thus established from which general dissemination may take place by means of the blood and lymphatic vessels. Clinically this disease in man presents itself under somewhat varying aspects. When attacking the maxillary region it generally commences with pain in one or more teeth; a swelling soon appears, and, after the lapse of weeks or months, the disease culminates in a diffuse general enlargement of one side of the neck or face. The swelling becomes soft and fluctuating, but, on opening the softened areas, only a few drops of pus escaped, and the tissues are found infiltrated by a soft spongy granulation tissue. The progress of the malady is extremely chronic as a rule. In actinomycosis of the lung and thorax, pain in the side with pleurisy or pleuro-pneumonia are commonly the first symptoms. The duration of the disease in fatal cases varies from ten weeks to a year and a half or more. Secondary formations have been found in the liver, lung, kidney, spleen, intestines, brain, ovary, heart-muscle, and in the muscles and skin. Up to 1886 an analysis of seventy-five recorded cases was drawn up by Moosbrugger. In twenty-nine the disease was in the neighbourhood of the lower jaw, in the mouth and neck; in nine in the upper jaw and cheek; in one case in the tongue, and in two involving the pharynx and œsophagus; eleven in the intestines and abdominal viscera; fourteen in the bronchial tubes or lung. In seven the seat of the disease could not be ascertained. As to the prognosis of this disease, there is little chance in man of a spontaneous cure, as sometimes happens in cattle similarly affected; operative measures are successful if the affected part be completely removed, and the patient may be free from a return for years; cases of visceral actinomycosis are necessarily fatal. In cases beyond the reach of operative measures it has been recommended to inject a solution of perchloride of mercury, but unless the disease can be eradicated by the knife in its earliest stage, there is little hope of a cure.

RICHARD NEALE, M.D.

ARTICLE 547.

DEHIO ON A CASE OF RUMINATION IN MAN.

IN the *St. Petersburger med. Wochensch.*, No. 1, 1888, p. 1, Professor Karl K. Dehio, of Dorpat, publishes an able and carefully written account of a well-studied case of this kind. A rather pale, meagre, excitable, and generally nervous youth of 21, an apothecary's assistant, sought the writer's advice for trifling chronic laryngitis and bronchitis, which apparently filled his mind with great anxiety, the lad being of a hypochondriac disposition. In the course of the examination he volunteered the statement that he had a peculiar habit of ruminating his food shortly after its ingestion. A member of a quiet healthy family, he had been well and sound up to the age of 12, when a violent and prolonged attack of whooping-cough made its appearance, the paroxysms being invariably associated with vomiting. He got rid of the disease ultimately, but from that time a regular habitual rumination of all of his meals set in, until he was 16 years old. Without any effort or straining on his part, a medium-sized morsel of the food ingested would rise up into his mouth to be once more thoroughly chewed and again swallowed. Then another similar portion would find its way into his oral cavity, and so on. Not the slightest nausea, or pain, or any unpleasant sensation was ever experienced by the youth during this curious process; on the contrary, he rechewed the gastric contents with perfect gusto. The rumination used to commence about a quarter of an hour after the meal, and to last for half or one hour, seldom longer. The taste of the cud was not sour, according to the patient. He never had any gaseous eructations. His appetite was always excellent, the youth being a large eater, all through. Later on, the rumination gradually became less frequent, and at present it occurs only after exceptionally liberal meals, especially after pastry and sweets, and invariably after eating porridge. Of late he has suffered now and then from slight dyspeptic symptoms (such as nausea and gastric pain), which, however, always disappeared after a purgative and some restriction of his dietary. A careful experimental examination proved that the patient's stomach was quite normal both in chemical and mechanical regards. Professor Dehio lays stress especially on the fact that the youth's cardia (with its closing muscular bundles) was fully intact and effective, since Dumur, Poensgen, and Oser assert that atony, or even paralysis, of the cardia represents a necessary and essential condition for the occurrence of rumination in man. Entirely differing from those authors, Dr. Dehio is inclined to think that rumination is nothing else than a perverted co-ordinated motor process, similar to that of vomiting. In rumination, like in vomiting, there takes place an active contraction of the so-called *musculus dilatator cardiæ*, which leads to opening of the orifice, and which combines itself with expelling contractions of the stomach in a certain regular order. The process is of a reflex nature, the said motor mechanism being set in motion by the food entering the stomach (and exciting the gastric sensible nerves). The sensory excitation is transferred to the motor tracts in Openchowski-Hlasko's cerebral centres for dilatation of the cardia and contractions of the stomach. Rumination, therefore, appears to be a reflex motor neurosis of the stomach. In the case given (like in that of Eichhorst) the affection is thought to have developed in consequence of overstraining of the vomiting centre during a preceding attack of whooping-cough, which overstrain left an abnormally increased irritability of the said mechanism. The predisposing causes were supposed to be neurasthenia, on one side, and the habit of eating very much and exceedingly hurriedly, on the other. As Johannessen has recently shown, the same predisposing movements are discovered in a large majority of the cases under consideration.

V. IDELSON, M.D.

ARTICLE 548.

BAMBERGER ON OERTEL'S METHOD.

THE first number of the *Wiener klinische Wochenschrift*, a new and most promising medical periodical, which commenced on April 5, contains an article by Prof. Bamberger on the applicability of Oertel's method to cases of cardiac valvular disease. The undoubtedly favourable results which follow the use of this method in many chronic circulatory disorders entail the demand for a precise delimitation of the suitable cases for its application. 'For although there is a certain similarity between all the diseases of this group, yet as regards their essential causes and results they are very different, and we cannot suppose that the same treatment will suit them all. Two patients, one suffering from aortic aneurysm, the other from advanced fatty degeneration of the heart, may have very similar symptoms, but the indications for treatment are different.' Valvular disease of the heart takes the first place in frequency and importance in the group of circulatory disorders, and every physician must ask himself the question whether it is to be treated by the old methods, used by the greatest and most experienced masters, or by the new and for the most part diametrically opposite method, the author of which occupies an honourable rank in science, and appeals to unmistakable successes. Oertel at first advised his method for another group of cases, and with most satisfactory results, but afterwards extended its use to cases of valvular failure, especially mitral, with certain limitations when other conditions are present, *e.g.* Bright's disease, complete degeneration of the heart-muscle with sclerosis of the coronary arteries, and acute or subacute inflammatory processes in the heart (in particular, masked endocarditis). But, in the first place, these conditions are not always easy to diagnose during life, and, next, the question is far from being settled if they are diagnosed. 'Having been occupied over forty years with these conditions, I should like to make some remarks on this subject. As regards myself, I may be permitted to observe that I am not in the remotest degree an opponent in the main of Oertel's method; on the contrary, I regard it in one aspect as a decided advance; only that Goethe's dictum seems to me especially applicable here—"The master shows himself by his restrictions (Beschränkung)."' Oertel's treatment rests mainly on these two principles:—1. A reduction of the fluids consumed, with a concomitant increase of cutaneous transpiration. 2. Increased muscular activity—viz. walks, lasting several hours, especially mountain rambles, beginning, of course, gradually. Let us closely examine the influence of each of these factors in valvular failure.

I. *The water reduction.*—Oertel assumes, as regards most chronic circulatory disorders, that the

chief element in the case is an absolute increase of the quantity of blood, its water being increased and its solids diminished—*i.e.* that serous or hydræmic plethora exists. 'It is true that this condition arises both with and without circulatory disorder, but I cannot agree that in the latter case it is a constant or almost constant factor. Is it the case in valvular failure? Valvular diseases cause an abnormal distribution of blood without necessarily influencing its quantity or quality, though such influence may easily happen through backward action on the blood-forming, secretory, and regulatory organs. But we do not know much about these processes, and the influence of backward action (stasis) is *à priori* still less understood.

'The only possible way to be sure of our facts is to directly examine the blood. We can thus learn whether the watery part of it is increased or diminished, though we cannot learn the absolute quantity of blood. This has not been done by Oertel; at least no indication is given on the subject. He must have made his statement on theoretical grounds only, and it is easy to see that the two chief ones are the lessened urine and the great tendency to dropsy. Neither of these is a sufficient reason. Diminution of urine may cause serous plethora, but not necessarily; the wonderful regulatory functions of the kidney, both in sickness and health, embrace far more difficult problems than mere water regulation. This diminution may be due, apart from the possibility of excretion in other ways, to lessened thirst and lessened consumption of fluids. Again, dropsy is favoured by a watery state of the blood; but this is not at all essential. It is a matter of experience, absolutely established by experimental pathology also, that increase of intravenous blood-pressure, even when acting backwards upon the lymph-channels, may cause dropsy when the blood is perfectly normal in composition. The fact is, our knowledge is still scanty as regards the condition of the blood in valvular disease, but the point at issue here is merely the proportion of water to the solids, and this can be easily ascertained in *post-mortem* examinations. These reveal after chronic valvular disease a very dark and thick blood; a thin and bright red blood always in such cases indicates some complication. In former days, when bleeding was more frequently done, I have seen blood of almost treacly consistence during life, and almost refusing to flow. This is altogether in contradiction to Oertel's theory of a serious plethora as a common condition in valvular disease. But as an *à priori* denial of this condition was impossible, and as the point seemed to me a vital one, I have during the winter session made examinations of the blood in all the cases (thirty-one) coming under my care in hospital for valvular disease.' Determinations were made of the proportions of the red and white corpuscles, hæmoglobin, specific gravity, and residue after evaporation at 120° C. The results were, taking the milder cases first, that the blood was usually found to be poor in corpuscles and in colour. Hospital patients are generally pale, badly nourished individuals, with oligæmia rather than plethora. As to the more severe cases, the striking fact was brought out that higher values than the normal had to be assigned to the red corpuscles and hæmoglobin, specific gravity, and solid residue. In three of these cases repeated examinations showed a steady increase of the solids of the blood in spite of advancing dropsy. The same was true in a case of advanced emphysema without valvular disease.

Oertel's theory of a serous plethora cannot therefore be upheld, Professor Bamberger concludes from the above; the venous stasis alone is sufficient to account for the symptoms, and no author on the subject has found it necessary to go further. Removal of water from the system is only justified where there has been an habitual abuse of liquids; in all other cases the organism may be trusted to regulate its water-balance.

II. *The cardiac gymnastic.*—This, the *punctum crucis* of Oertel's method, aims at the strengthening of the heart-muscle by powerful contractions, with a rise of blood-pressure throughout the arterial and diminished stasis in the venous system. Hill-climbing is found to be the most effective means. 'It may be granted that no better method can be adopted in simple cardiac debility, in fatty deposition, even in commencing fatty degeneration, in passive dilatation from over-feeding and want of exercise, and in convalescence from acute diseases. Oertel was the first to use the method when grave conditions were present, *e.g.* dropsy, albuminuria, and severe dyspnœa, when rest would have been strictly enjoined by most medical men, and his chief case shows what striking success may attend its use.' But the case is different with a diseased organ. It is a law, as old as medicine itself, that such an organ should have no extra work beyond its vital functions, and surely a heart with defective valves is a diseased organ. There is, moreover, a great disposition to inflammatory processes in all three cardiac layers in valvular diseases. Oertel would limit his method to cases of commencing failure of compensation; but even in these there are often present conditions which render cardiac hypertrophy impossible. In the more advanced cases the increased work thrown on the heart is supposed to cause degeneration. 'This may be true in a certain number of cases, but not in the majority, at least not exclusively. The changes observed macroscopically and microscopically are often too insignificant to account for death, and we must regard as one of the chief causes of this result the final exhaustion of the central nervous apparatus of the heart. A wide gap exists here between Oertel's theory and his practice, for severe cases are not subjected to hard work, but to mere gentle promenades. This cannot be called a cardiac gymnastic; neither, though such gentle exercise may be productive of the greatest benefit, can it be called new. I myself have not only allowed but advised gentle exercise in the open air in cases with slight disturbances of compensation. . . . But over-exertion cannot be too earnestly deprecated, and Oertel himself allowed this, for the advantages to be obtained are quite disproportionate to the dangers incurred.' Thus ends Bamberger, and it may be said that on the whole his remarks tend to the support of Oertel's method; for all the cases in which the former deprecates the use of this method are cases in which Oertel himself would deprecate it. Certainly the removal of water from the system is not indicated in thin anæmic subjects, even when œdemata arise. And as certainly does Oertel deprecate severe exertion in dangerous cardiac lesions.

[As to Professor Bamberger's examinations of blood from his patients, it may be remarked that the specific gravity was normal in most of the cases. The average of the eighteen cases in which the

specific gravity was ascertained was 1·055; the highest was only 1·062, the lowest 1·041. As to the red corpuscles, in the milder cases, they were less numerous than normal in 17 out of 19 cases; in the advanced cases, in 7 out of 18 cases examined. The hæmoglobin was certainly above the average in the advanced cases, but it was also above the average in several of the milder cases. The leucocytes were less than normal in most of the advanced cases. The solid residue showed great discrepancies: 9 examinations were made in mild cases, and it was above the normal average in 5, normal in 1, and below the normal in 3. As to the advanced cases it was above normal in 7 out of 10 examinations, normal in 1, and much below in 2. These results are too discrepant, and also too few in number, to carry much conviction; but if further established they will of course prove that Oertel has based his statement—that the blood is more watery than normal in venous stasis from circulatory derangements—upon an unwarranted and incorrect assumption. But even then his method may be right when used in suitable cases, though his theory may be wrong. Professor Bamberger himself gives it high praise when properly used.—*Rep.*]

E. J. EDWARDES, M.D.

ARTICLE 549.

HUCHARD AND OTHERS ON HYSTERIA OF THE RESPIRATORY ORGANS.

THE *Journal de Médecine* of May 6 publishes a paper by M. Henri Huchard on hysteria of the respiratory organs. The author has already remarked how frequently simple laryngitis, angina pectoris, or bronchitis is transformed into aphonia, spasmodic contraction of the œsophagus, or a hoarse, sonorous cough, symptoms which an antiphlogistic treatment entirely fails to combat, and which disappear spontaneously.

M. Léon Petit describes a case of *pulmonary* hysteria, which M. Huchard regards as one of hæmoptysis of hysteric origin. The spasms may be localised in the nose, the larynx, the diaphragm, bronchial tubes, &c. M. Huchard quoted cases of spasms of hysterical origin in the respiratory organs where tracheotomy was resorted to, but without modifying the symptoms. M. Huchard points out the difficulty, and at the same time the importance, of establishing the exact relations between hysteria and the affections of the respiratory organs without confusion.

At the second stage of consumption a sonorous, incessant cough will appear quite suddenly, followed by aphonia, hæmoptysis (which usually recurs at the menstrual period), complete and persistent anorexia, and, in some cases, irrepressible vomiting, which may last for months or even years.

These symptoms continue for months, but the pulmonary lesions are not aggravated. All the pathological activity is monopolised by the hysteria. In other cases tuberculosis predominates, and hysteria is subservient. Brachet affirmed that hysteria encouraged the evolution of tuberculosis; other authors have stated that tuberculosis determines the appearance of hysteria. Both these conclusions are erroneous. Without entirely admitting the truth of Leudet's theory, that phthisis and hysteria exercise an antagonistic influence on each other, M. Huchard affirms that in many cases he has observed that the combination of the two affections in the same patient changes the habitual aspect of each of the affections. In tuberculous hysterical patients there is a complete disparity between the relatively benign local condition and the serious character of the functional disturbance. The consequence is that errors in the diagnosis may often arise. It is most important to distinguish the different influence exercised by hysteria and tuberculosis in the same patient, and exactly which symptoms are due to each affection.

W. VIGNAL.

ARTICLE 550.

COE ON PAIN IN PELVIC DISEASE.

DR. HENRY C. COE, of New York, has published in *Gaillard's Medical Journal* for February 1888 an instructive communication on 'The Significance and Localisation of Pain in Pelvic Disease,' which was read last autumn before the New York Neurological Society. His observations refer to pelvic diseases in the female alone. He analyses the subjective symptoms so frequently described by women who flock to the out-patient department of large hospitals. He attributes chronic pain over the sacrum—the 'sacrache' of Matthews Duncan—to perimetric inflammation in the posterior pelvic fossa, the pain being principally due to the inclusion of sympathetic nerves in exudations and adhesions, and not to direct pressure on the sacral plexus. The burning, lancinating pains of cancer of the uterus are, Dr. Coe believes, due to the same cause. The cervix is hardly sensitive; but as the cancer extends into the parametric connective tissue, and later when it sets up acute or subacute peritonitis, the malignant or purely inflammatory exudations press on nerves and cause pain, which was almost absent as long as the cervix alone was involved. The shooting, sickening pains often considered to be 'ovarian'—that is to say, intra-ovarian—are likewise referred by Dr. Coe to pressure on the nerve-fibres before they enter the ovary, and not to pressure on the terminal filaments within the ovarian stroma, in consequence of general induration of the tissue. In this case, again, it is inflammatory exudation which presses on the nerve-fibres. Physical examination often fails in helping the gynæcologist to ascertain the precise site or origin of pelvic pain.

From the above statements, Dr. Coe draws certain deductions. First, he declares that pelvic pain has its origin more often in the perimetric tissues (including what British authorities understand by the parametric connective tissue) than in any particular organ, being due to irritation of nerve-trunks rather than nerve-endings. Then Dr. Coe infers that the reflex or transferred pains commonly referred to certain lesions in the pelvic organs may radiate from inflammatory foci in the peritoneum or connective tissues surrounding those organs. Dr. Coe believes that this pain, like other nerve pains, may be sensibly relieved by the proper application of electricity, although how the current can influence the inflammatory exudations, which he believes to be the cause of the pain, is not clearly stated. The most important statement of Dr. Coe is that which refers to the failure of operations where the uterine appendages are removed for chronic or subacute pains attributed to ovarian or tubal disease. The pain being not so much due to the irritation of nerve-endings in diseased or possibly normal ovaries, but rather to the pressure of nerves

in their course through perimetritic or parametritic exudations, to which may be added intestinal adhesions, the chief sources of pain are not removed when the appendages are amputated.

ALBAN DORAN.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

551. LABORDE.—On Meco-Narcein. (*Gazette des Hôpitaux*, May 12.)

552. GRETCHINSKY, DR. V. P.—On Buckthorn as a Popular Remedy for Toothache. (*Zübovratchebnyi Vestnik*, February 1888, p. 76.)

553. GRENFELL.—On the Treatment of Pyrexia with Phenacetin. (*Practitioner*, May 1888, p. 344.)

554. MURRELL.—On Cases Treated with Ipecacuanha Spray. (*Med. Press and Circular*, April 1888.)

555. STROUD.—On Pretoria as a Health-resort. (*Lancet*, May 1888, p. 1063.)

556. SARDA, DR.—On Antipyrin, Acetanilide, and Solanine as Nervine Remedies. (*Bull. Gén. de Thérap.*, May 30, 1888.)

557. HUCHARD, DR.—On Antipyrin in Polyuria and Diabetes. (*Rev. Gén. de Clin. et de Thérap.*, May 24, 1887.)

558. BARATOUX, DR.—On the Thuya Occidentalis in the Treatment of Dermoid Vegetations and Epitheliomata. (*Rev. Gén. de Clin. et de Thérap.*, May 24, 1888.)

559. POULOUX, DR.—On Bay-laurel. A new Cardiac Remedy. (*Rev. Gén. de Clin. et de Thérap.*, May 24, 1888.)

560. DUBOUSQUET-LABORDERIE, DR.—On Whooping-Cough and Antipyrin. (*Bull. Gén. de Thérap.*, May 15, 1888.)

561. MOREAU AND COCHEZ, DRS.—On Hydrofluoric Acid in the Treatment of Affections of the Respiratory Organs. (*Bull. Gén. de Thérap.*, May 15, 1888.)

562. BERTHERAND, DR.—On some Remedies of Algerian Origin. (*Bull. Gén. de Thérap.*, May 15, 1888.)

563. DELAGE, M.—On the Syrup of Ipecacuanha. (*Bull. Gén. de Thérap.*, April 30, 1888.)

564. NOURRY, M.—On Hypodermic Injections of Soluble Iodo-tannate of Mercury. (*Bull. Gén. de Thérap.*, April 30, 1888.)

565. GAUCHER, DR.—On the Treatment of Diphtheria. (*Rev. de Thérap.*, March 15, 1888.)

566. Oil of Turpentine in Diphtheria.

567. Syrupus Ferri Iodidi.

568. Liquid Albuminate of Iron.

569. The Preparation of Suppositories.

570. Paste for the Toothache.

ART. 551. *Laborde on Meco-Narcein.*—At the meeting on May 8 of the Académie de Médecine, M. J.-V. Laborde made an interesting communication concerning meco-narcein—a new product obtained from opium, and possessing the physiological and therapeutical properties of narcein. Narcein, a product obtained directly from opium and discovered by Pelletier, has been neglected, and almost forgotten, owing to the several drawbacks it offers. It is very expensive. It is only slightly soluble in ordinary mediums, more especially in water, and is not therefore applicable by the hypodermic method, and is only absorbed with great difficulty. Moreover, Pelletier's process does not succeed with every kind of opium. MM. Laborde and Duquesnel have made experimental and chemical researches to find a means of obviating these drawbacks. Their experiments have resulted in the discovery of meco-narcein, which possesses the same physiological properties as narcein, but at the same time offers the following advantages :—It is much more soluble than narcein ; its action is more powerful and more certain.

W. VIGNAL.

552. *Gretchinsky on Buckthorn in Toothache.*—In the *Zübovratchebnyi Vestnik*, February 1888, p. 76, Dr. V. P. Gretchinsky, of Gorodnïa, Tchernigov Government, writes that, having learnt accidentally from the local (South Russian) peasantry about their treating toothache by gargling with a decoction of common buckthorn (*Rhamnus frangula* ; Russ. 'krüshïna'), he undertook a series of control experiments on inmates of the local prison. The decoction used was prepared by boiling a mixture of from one-half to one ounce of the bark or root with two glassfuls of boiling water for half-an-hour. The patients were ordered to gargle their mouths (especially on the side affected) with the decoction (after it had cooled down, of course) every three or five minutes till the pain disappeared, and then at intervals of from one-half to two hours. In every one of the cases acute suffering—the indescribable 'dental agony'—disappeared in about half-an-hour, though there still remained a vague aching or a kind of 'itching' about the teeth. To secure a prolonged anodyne effect of the remedy it was found necessary to insert into the cavity of the tooth a cotton-wool plug soaked in the same decoction. 'The patients who formerly could not find a moment's rest from their torments were enabled by the treatment to sleep quietly, to eat, drink, and work.' On the whole, Dr. Gretchinsky concludes from his experience that (1) buckthorn is a 'reliable means for mitigating such dental pain as depends upon inflammation of the pulp, but is less effective in regard to that caused by suppuration and sloughing of the structure' ; (2) 'it might prove a useful and harmless domestic remedy for toothache in such cases where the aid of a dentist cannot be immediately obtained, or is altogether inaccessible' (the whole of the Russian peasantry are in this plight up to the present, being treated for toothache almost exclusively by 'wise women' and 'wise men,' who kill the pain by conjurations, charms, and various secret compounds) ; (3) a similar but somewhat weaker anodyne action is also shown by infusions of the buckthorn ; (4) the remedy may be conveniently prescribed after the following formula :

℞ Corticis frangulæ, 100·0 ; coque cum aquâ fontanâ ; colat. 200·0 ; adde spir. vini cognac, 10·0.

[Referring to Dr. Gretchinsky's paper, Dr. K. V. Skürkhovitch, the editor of the *Novosti Terapii* (March 1888, p. 114) says that the pain-soothing action of the buckthorn decoction is to be attributed to a powerful astringent property of the fluid, which contains large quantities of tannic acid. The same effects are said to be frequently observed when other astringent gargles (such as decoctions or infusions of pockwood, solutions of tannin, &c.) are employed.—*Rep.*]

V. IDELSON, M.D.

553. *Grenfell on the Treatment of Pyrexia with Phenacetin.*—In the *Practitioner*, May 1888, p. 344, Mr. Grenfell reports several cases in which he tried the effect of phenacetin in lowering temperature. This drug is an acetyl-compound of phenitidin and is analogous to antifebrin. It is a slightly reddish inodorous and tasteless powder, soluble with difficulty in water, a little more soluble in glycerine, but most readily in hot alcohol ; it is insoluble in acids

(except glacial acetic acid) or alkaline liquids. Though absolutely tasteless it is best given in capsules, in order that the quantity taken may be accurately known. In a case of phthisis with pleurisy, five grains of the drug were given, when the patient's temperature was 102·°4 F., and in five hours the temperature was 100·°4 F. In another case of phthisis, eight grains were given, when the temperature was 102·°4 F., and next morning it was normal. In pneumonia, eight-grain doses were always followed by a fall of one, two, or even sometimes three degrees of temperature. In two cases of erysipelas it was used with complete success. The action of the drug begins within half an hour of its administration. The patient generally perspires freely and feels drowsy, often accompanied with a refreshing sleep. The author has also tried its effects as an analgesic in neuralgia, and finds it most beneficial.

554. *Murrell on Cases Treated with Ipecacuanha Spray.*—In the *Med. Press and Circular*, April 1888, Dr. Wm. Murrell records some cases in which he had used the ipecacuanha spray with marked success. It is most useful in cases of chronic bronchitis and bronchial catarrh. In fibroid phthisis its use is often attended with a marked improvement, even when no constitutional treatment is adopted. A single inhalation will sometimes restore the voice in cases of hoarseness due to congestion of the vocal cords. It is a matter of little importance whether the spray be given with a handball spray apparatus, or with a small steam vaporiser. In either case the spray must be warm, and the patient should not go out for some minutes after inhaling. Care should be taken to see the spray really enters the chest, and is not stopped by the arching of the tongue against the wall of the mouth. The best results are obtained by using the spray for about ten minutes three or four times a day. In the majority of cases of winter cough relief will be obtained in ten days. [Since Ringer in 1874, vide *Medical Digest*, sect. 648 : 6, recommended the ipecacuanha spray in winter and other coughs, the writer has constantly used it with great benefit, and can confirm all that both Dr. Ringer and Dr. Murrell have advanced in its favour. —*Rep.*]

555. *Stroud on Pretoria as a Health-resort.*—In the *Lancet*, May 1888, p. 1063, Dr. Stroud refers to the value of Pretoria, in the South African Republic, as a health-resort. The author has lived in South Africa for twenty years, and has visited all parts of the country, but does not consider any place can equal the glorious climate to be met with in Pretoria, from May to November. The city of Pretoria stands about 4,620 feet above the level of the sea, delightfully surrounded, and well protected from noxious winds. It is now very readily reached by (1) taking rail from Port Elizabeth or Cape Town to Kimberley, and thence by coach through Johannisburg to Pretoria ; or (2) *viâ* Natal. from Durban by rail to Ladysmith, and from there by coach to Pretoria, where the hotel accommodation is second to none. Of late years many invalids have derived great benefit from a six-months' stay in the salubrious air of this pleasant health-resort, and now that the goldfields are becoming so important every year brings a large increase of population to the country, all who have lived in Pretoria being loud in their praises of the great benefit that consumptives have obtained from their visit.

RICHARD NEALE, M.D.

556. *Sarda on Antipyrin, Acetanilide, and Solanine as Nervine Remedies.*—Comparative observations were carried out on 130 patients with antipyrin and antifebrin, which, though they both possess antipyretic action, differ from each other in their effects on sensation and motion. In upwards of forty cases of acute and subacute articular rheumatism, either primary or secondary, antipyrin procured relief far more rapidly and completely than acetanilide. The same result was observed in most of the cases of neuralgia of rheumatic origin and of short standing ; also in two cases of gonorrhœal sciatica. In chronic rheumatism the effect obtained by the two drugs was about the same. In muscular rheumatism (myalgia) antipyrin was again far superior. Most patients suffering from migraine preferred antipyrin, although acetanilide relieved several severe cases. Antipyrin is undoubtedly the best remedy, but it sometimes fails, and then acetanilide may be employed, although it rarely succeeds where antipyrin has not effected relief. In neuralgia of long standing, antipyrin is as inert as it is useful in paroxysmal attacks. In these cases acetanilide generally yielded a temporary relief. In paralysis agitans and myelitis, antipyrin calmed the shooting pains for a time in some cases, but failed in others. No effect was produced on the motor inco-ordination. In four cases of epileptic tremor and one of paralysis agitans no result whatever was obtained. On the whole, antipyrin appeared to affect sensation much more than motion, and this constituted a point of difference between its action and that of acetanilide. Much more useful than the latter as a remedy for paroxysmal pain, antipyrin is inferior to it in the treatment of motor excitement. Comparing the action of solanine with that of the preceding drugs, it appeared to be without effect in acute articular rheumatism ; but in a severe case of muscular rheumatism in a confirmed inebriate, the pain and the alcoholic trembling disappeared completely in two days. In two cases of simple gastric ulcer, solanine relieved the pain better than acetanilide, though the latter proved more effectual than antipyrin. In four cases of obstinate sciatica, solanine procured several weeks' relief from the pain. In the case of ataxia already alluded to, acetanilide calmed the 'lightning pains' better than antipyrin, but the effect of solanine was even more pronounced. He concludes that solanine is a powerful analgesic in cases in which the pain is of old standing, and is superior to either of the other drugs when the neuralgia is accompanied by structural change (gastric ulcers, neuritis, &c.). This led them to try it in a case of inveterate tic douloureux which had resisted all previous treatment, notably antipyrin. Under its influence the attacks became less frequent and less severe, and the case is still under treatment. Finally, in two cases of greatly exaggerated reflexes (trepidation epileptoïde), solanine caused their complete subsidence.

557. *Huchard on Antipyrin in Polyuria and Diabetes.*—Encouraged by some cases of diabetes in which great benefit was obtained by Gönner, of Zurich, from antipyrin, M. Huchard resorted to it in a case of polyuria dependent on a meningo-myelitis, giving it in doses of from 1 to 1½ drachms daily. The success was remarkable and permanent, for the patient, instead of passing 28 to 30 litres of urine daily, only passed about 4 litres. As polyuria is, generally speaking, a symptom and not a disease, no one plan of treatment can be relied

upon, and even if antipyrin be useful in polyuria of bulbar origin, it may prove useless and even dangerous in that of renal origin. In a case of diabetes reported by the author, the sugar excreted fell from 735 grammes to 335, and even to 271 under the influence of from half a drachm to a drachm and a half of antipyrin daily. He mentions that he has never known albuminuria to follow its ingestion. The drug has also been employed with apparent benefit in exophthalmic goître.

558. *Baratoux on the Thuya Occidentalis in the Treatment of Dermoid Vegetations and Epitheliomata.*—The tincture of thuya occidentalis applied with a camel's hair brush to vegetations, such as condylomata, the simple chancre, and even epitheliomata, has occasioned considerable benefit. The vegetations do not disappear but become smaller and softer. Vegetations developed on mucous surfaces, on the contrary, disappear entirely under the influence of the tincture given internally. Very good results were obtained in the treatment of epithelioma of the cervix when the drug was given internally, employing it at the same time as a topical application. M. Baratoux precognised the value of the drug in epitheliomatous affections of the larynx and pharynx. He gives the tincture in 20-drop doses and upwards; paints the diseased areas, then sprays them with a 1-20 solution in glycerine. The discharge loses its fœtor and becomes scanty, while the growth diminishes in size.

559. *Pouloux on Bay-laurel.* — The *Nerium oleander* (bay-laurel, or oleander) was mentioned by Fraser some years since as a cardiac remedy, and more recently Schmiedeberg succeeded in obtaining from the leaves of the African plant two bodies—nereine and oleandrine. Nereine (or Oleander digitalin) possesses powers very similar to those of digitalis. It is yellow in colour, and readily soluble in water and alcohol. Oleandrine is soluble in from forty to fifty parts of water, and possesses all the physiological properties of the digitalis group. It has been given in the form of a hydro-alcoholic extract in doses of from one to two grains daily. It strengthens the heart-beat, augments diuresis in asystole, and has no cumulative action.

560. *Dubousquet-Laborderie on Whooping-Cough and Antipyrin.*—Living in a suburb of Paris inhabited by working people and with abundant opportunities of studying whooping-cough, the author has tried antipyrin for the last eighteen months, with results which have appeared to him sufficiently satisfactory to warrant their being published. He regards whooping-cough as 'a specific bronchial catarrh with neurosis.' The salient features are therefore three in number—the catarrh, the specific element, and the neurosis. The effect of antipyrin appeared to bear on the two latter. Out of a large number of cases thus treated, fifteen were very closely observed. He found that children tolerated the drug well, with few exceptions, and it rarely gave rise to distressing symptoms. The spasm is promptly overcome, and the period of decline follows in the course of a few days. He employed doses of from five to fifteen grains daily, for children under two years of age, and from fifteen to sixty grains for older children and adults, given in Vichy water flavoured with syrup of raspberries, &c. In one case he found it necessary to give fifteen grains to a child of ten, *per rectum*. The author insists on the importance of obtaining the pure drug, one sample having given rise to troublesome nausea and colic in a patient who experienced no inconvenience from the drug obtained from another source.

561. *Moreau and Cochez on Hydrofluoric Acid in the Treatment of Affections of the Respiratory Organs.*—In a paper read at the Congress at Oran the results obtained with hydrofluoric acid in the treatment of diseases of the respiratory organs were as follows:—Out of sixty patients, both at the hospital and in private practice, twenty-eight improved, four remained stationary, nine became worse, four died, and the remainder did not continue the treatment. It appeared to excite the appetite and to modify the bronchial secretions, and was generally well supported by the patients.

562. *Bertherand on some Remedies of Algerian Origin.*—The Arabian *fraham* (Aceras anthophora) is extensively used as a sudorific and stimulant; the *taubra* (Globulaire turbith), in doses of four to six drachms, is the usual purgative employed by the natives; the *koheuls* are valued as prophylactics against ocular affections, and in the treatment of granular lids; the *arenaria rubra* is given for gravel and vesical catarrh; date kernels are used as an astringent in atonic diarrhœa; the *lantana*, which is rich in essential oils, is employed in the form of hip-baths in the treatment of the acute colicky pains of dysmenorrhœa, and in the form of injections for leucorrhœal discharges; the *goyafine* is a fruit, the pulp of which made into a tea is reputed to be a sovereign remedy in indigestion, and in the form of pills is largely resorted to in the treatment of intermittent fever; lastly, the *schœnus molle* is used in gonorrhœa.

563. *Delage on the Syrup of Ipecacuanha.*—The syrup of ipecacuanha may be prepared with advantage in the way suggested by M. Delage, as follows:—1,000 gammes of the root is broken up into pieces and put to soak in 360 grammes of alcohol at 60°. Twelve hours after, the alcohol is replaced by *cold* distilled water, and the two products are collected separately. Filter them both, and to the aqueous solution add sugar and make a syrup. Pass the latter through a piece of muslin, and when cold add the alcoholic solution. In this way a perfectly clear syrup is obtained, which keeps indefinitely.

564. *Nourry on Hypodermic Injections of Soluble Iodo-tannate of Mercury.*—After many experiments the formula resolved upon contained:—Mercury, $\frac{1}{8}$ grain; iodine, $\frac{3}{4}$ grain; kramero-tannic acid, $\frac{3}{8}$ grain; pure glycerine, 1 cubic centimètre. The quantity of mercury contained in this injection corresponds to that contained in one-seventh of a grain of calomel or yellow oxide. It gives rise to no pain on injection, and never causes suppuration. Absorption takes place rapidly, and violent salivation is produced within forty-eight hours, so that it is well not to commence with more than half the quantity.

565. *Gaucher on the Treatment of Diphtheria.*—The false membranes, being the source of infection, should be removed, their site being painted with a concentrated solution of carbolic acid and camphor, in alcohol, to which some olive or almond oil has been added. The solution he usually employs contains 10 grammes of crystallised carbolic acid and 20 or 30 grammes of camphor dissolved in 10 grammes of alcohol, to which an equal quantity of oil is added. The strength may be varied according to the severity of the malady. The essential prin-

ciple of the treatment consists in the topical application of a caustic and antiseptic solution after the removal of the membranes. The latter he effects by vigorous rubbing with some cotton-wool wound round a slender piece of wood, a painful operation which has to be repeated morning and evening.

566. *Oil of Turpentine in Diphtheria.*—The oil of turpentine is given by the teaspoonful three times a day. As a corrective, use spiritus ætheris, 1 gramme (16 minims) of the spirits to every 15 grammes (4 drachms) of turpentine oil. At the same time give a tablespoonful of a 2 per cent. solution of sodium salicylate every two hours; also use ice-bags, and have the patient gargle frequently with a 1 per cent. solution of potassium chlor. The following are the results: 1. The fever and the frequency of the pulse decreased rapidly. 2. The subjective difficulties, such as headache and difficulty in swallowing, were soon relieved.

567. *Syrupus Ferri Iodidi.*—The decomposition of the syrupus ferri iodidi may be prevented by adding one part of citric acid to 1,000 of the syrup. The result is the formation of a ferro-citrate which prevents subsequent oxidation.

568. *Liquid Albuminate of Iron.*—Three grammes of dried egg albumen is dissolved in 30 grammes of cinnamon water. Twelve grammes of liquor ferri perchloridi fortior is then mixed with 40 grammes of distilled water and added to the preceding. To the mixture add 1 gramme of solution of ammonia, shake well, and then filter. The product is an aromatic liquid of a brownish-red colour and alkaline reaction.

569. *The Preparation of Suppositories.*—Instead of melting the cocoa butter, it has been suggested to soften it with a few drops of benzine, and then to mould the suppositories with the fingers. M. Nicot suggests mixing a drachm of powdered rhatany root with a few drops of 'treacle extract' and a small quantity of vaseline. The cocoa butter is then coarsely powdered in a mortar and the whole well incorporated. The mass is softened with a few drops of ether and pressed into the mould. Suppositories thus made rapidly harden, and heat is unnecessary.

570. *Paste for the Toothache.*—Arsenious acid, 30 grains; hydrochlorate of cocaine, 30 grains; crystallised menthol, 8 grains, with enough glycerine to make a paste of proper consistency, which is pressed into the cavity of the aching tooth. The paste is obviously one to be employed with caution, as poisonous effects would certainly follow the accidental passage of even a small fragment into the stomach.

ALFRED S. GUBB.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

571. CORDES, DR. A.—On Viburnum Primifolium and Quinine in Abortion. (*Ann. de Gyn.*, April 1888.)

572. TERRILLON, DR.—On Nine Cases of Removal of the Ovaries for Uterine Hæmorrhage. (*Nouv. Archiv. d'Obst. et de Gyn.*, May 25, 1888.)

573. TURGARD, DR.—On a Clinical Sign during Labour of the Cord being Twisted Round the Neck of the Fœtus. (*Annales de Gyn.*, May 1888.)

574. GARDINER, DR.—Oophorectomy during Pregnancy. (*Arch. of Gyn.*, May 1888.)

575. PINARD, DR. A.—Multiple Hydatid Cysts Complicating Labour. (*Annales de Gynécologie*, April 1888.)

576. MORRIS, DR. JOHN.—On a Case of Arrested Fœtation. (*Obstetrical Gazette*, May 1888.)

577. BOUILLY, M.—On Salpingo-Ovaritis. (*Arch. de Tocologie*, May 1888.)

578. DUKE, A.—A New Operation for Repair of Lacerated Perineum. (*Med. Press and Circular*, May 1888, p. 483.)

579. LINDNER, DR.—Floating Kidney in Woman. (*Centralbl. für Gynäkologie*, No. 19, 1888.)

580. PECKHAM, DR. GRACE.—Wormian Bones in Fontanelles and their Effect in Childbirth. (*New York Med. Record*, April 14, 1888.)

581. KLEINWÄCHTER, Dr. L.—Ninety Cases of One-Child Sterility. (*Zeitschrift für Heilkunde*, Band viii., and *Centralbl. für Gynäk.*, No. 17, 1888.)

582. ORTHMANN, DR.—On Carcinoma Tubæ. (Report of April 27 Meeting of the Gesellschaft für Geburtshilfe und Gynäkologie zu Berlin. (*Centralbl. für Gynäkologie*, No. 21, 1888.)

583. LEOPOLD.—Cæsarean Section and its Relation to Induced Premature Labour, Turning, and Perforation in cases of Contracted Pelvis. Stuttgart, Enke, 1888, and *Centralblatt für Gynäkologie*, No. 19, 1888.

584. HOMANS, DR. J.—Ovariotomy in a Patient Eighty-two Years and Four Months of Age. (*Boston Med. and Surg. Jour.*, May 3, 1888.)

585. ROSENTHAL, DR. E.—Uterine Moles. (*Jour. of American Medical Association*, March 3, 1888.)

ART. 571. *Cordes on Viburnum Primifolium and Quinine in Abortion.*—The *Viburnum primifolium* is particularly useful as a uterine sedative in threatened abortion. In a series of observations Dr. Cordes was enabled to check the uterine contractions and so prevent the further progress of expulsive efforts. In the treatment of incomplete abortion he recommends quinine, which provokes moderate contraction of the uterus, sufficient, however, to complete the detachment of the ovum and expel it *en bloc*. The action of quinine offers many advantages over the use of instruments, when part of the ovum remains behind.

572. *Terrillon on Nine Cases of Removal of the Ovaries for Uterine Hæmorrhage.*—In nine patients suffering from uncontrollable hæmorrhage from the uterus, M. Terrillon removed both ovaries and tubes. The cases comprised two classes: in five the operation was performed on account of hæmorrhage due to the presence of fibromata, which were already large, were increasing in size, and threatened life; in the remaining four the hæmorrhage appeared to depend solely on ovarian irritation. In most of the cases the ovaries were healthy, but in some either the tubes or the ovaries appeared to be diseased. The first patient of the series died six weeks after from pyæmia, but all the others were promptly and permanently successful.

573. *Turgard on a Clinical Sign during Labour of the Cord being Twisted Round the Neck of the Fœtus.*—When, in an occipito-posterior position, rotation has been artificially produced, and when, within a short time, the occiput reverts to its former posterior position, winding of the umbilical cord round the neck of the fœtus may be suspected, and precautions taken to forestall interference with the fœtal circulation.

574. *Gardiner on Oophorectomy during Pregnancy.* Dr. W. Gardiner reports a case of dermoid ovarian cyst with a twisted pedicle, complicated by severe peritonitis. He had removed the cyst and both ovaries, washed out the abdominal cavity, and left a drainage-tube in the wound for five days. At the

time of the operation the uterus looked large and discoloured, and he had suspected pregnancy. Eight months after the operation the patient was delivered of a healthy child. He thought it remarkable that the pregnancy should have gone on to full term after the peritonitis, washing out of the abdomen, and drainage, as well as the removal of a large cyst. This was the second case in which he had removed an ovarian tumour in a pregnant woman who had subsequently been delivered of a child at full term. The question whether severe operations can be performed during pregnancy without producing abortion has already been shown by the experience of Verneuil and others. The severe traumatisms by which pregnant women unsuccessfully attempt to produce abortion alone would show, were other facts wanting, that abortion is very difficult to produce in healthy women.

575. *Pinard on Multiple Hydatid Cysts Complicating Labour.*—On March 22 a young woman was admitted into the hospital who had been in labour for two days. She was 21 years of age, and had never been ill; menses always regular. Last period on June 18. Six weeks later she noticed for the first time a tumour the size of an egg in the right hypochondrium. Some days later she suffered from retention of urine and dysuria. This condition of things lasted for a few days, and the tumour, so she said, disappeared. The pregnancy then followed a normal course till March 10, when the waters broke, and for about a week came away in abundance. When labour began on March 20, the midwife detected a tumour in the pelvis, but could not discover the situation of the os uteri. On admission the pains were frequent, and a colourless liquid flowed away from the vagina in somewhat considerable quantities. *Per vaginam* a tumour could be felt filling up the entire pelvis. After some trouble, Madame Victor, the midwife in charge of the wards, managed to discover the os by passing her finger between the tumour and the pubes in front. It was dilated to the size of a shilling. The fœtal pulsations were regular. Dr. Pinard, on examining her, found no deformation of the pelvis, but percussion was only resonant far back in the flanks. Elsewhere it was absolutely dull. Abdominal palpation revealed a hard smooth tumour in the left iliac fossa, on a level with the brim and overlapping the horizontal limb of the pubes by some two centimètres. The feet, &c. of the fœtus were felt at the fundus in the middle line. On the right side, just below the false ribs, a small superficial tumour was felt, apparently joined to the uterus, and becoming harder during the pains. Two other tumours, the size of an egg, were found in the right hypochondrium and just below. The liquid escaping from the vulva was stained with meconium. He was unable to define the limits of the tumour by vaginal examination. It was smooth, and could not be moved in any direction. No fluctuation could be made out. Surgical intervention appearing urgently called for, a large trocar was plunged into the tumour, giving exit to a clear, slightly viscid liquid, which proved to contain the characteristic hooks of the echinococcus. A litre and a half of this liquid escaped, and, as the tumour subsided, the head came down and the child was born alive. Unfortunately, the patient died of septicæmia four days later. At the autopsy an enormous cyst was found in the anterior lobe of the liver. Another cyst was found in the right iliac fossa, attached to the abdominal walls, and nine others hung down in a bunch from the anterior border of the liver. Some more cysts were discovered in the right flank and in Douglas' pouch, the latter being the cyst which was punctured. The ovary on the right side could not be found, and was apparently lost in the sac wall.

576. *Morris on a Case of Arrested Fœtation.*—On March 5, 1887, Dr. Morris was called to see Mrs. L., aged 32, the mother of three children. Mrs. L. had not menstruated for three months, and exhibited no symptoms of pregnancy. She had no morning sickness, which had been the case in other pregnancies; her breasts were not enlarged, and there was no apparent enlargement of the uterus. By vaginal examination he could discover very little, if any, change in the cervix. The patient's health was very good, and he advised her not to trouble her mind, as the suppression was perhaps but temporary. He was called about six months afterwards to see Mrs. L. She told him that she had not menstruated since he had last seen her, and that she had that morning passed a fleshy mass without pain or hæmorrhage. On examination this mass appeared to be of a fibrous character, and without critically examining it he formed the opinion that it was perhaps a submucous fibroid tumour that had been thrown off from the uterus. Wishing, however, to be certain of its character, he submitted it to Dr. Councilman, of the Johns Hopkins University. Dr. Councilman, after examination, reported that the growth was an embryo of about four or five weeks, with some cystic formation and thickening in the placenta, to which most probably the abortion was due. The only matter of interest in this case is that the woman should have had no constitutional disturbance; that she should have carried this blighted fœtus exactly to the full term, and that it should be then thrown off without pain, hæmorrhage, or after symptoms.

577. *Bouilly on Salpingo-Ovaritis.*—Starting with an account of six cases in which he had cured the patients by laparotomy, M. Bouilly pointed out that, in all, the evolution of the malady was slow (fourteen, nine, and six years), this period being characterised by alternations of calm and relatively good health, with attacks of inflammation and pain indicative of peritonitis. The disease may commence either by an attack of septic peritonitis subsequent to labour, or it may develop unsuspected. Once the condition is established, abdominal and general discomfort begins. The patients always 'feel' their abdomens, and are sterile. Acute attacks keep them in bed for eight or ten days at the menstrual periods, which are generally painful. Palpation shows some induration in one or both iliac fossæ; combined with vaginal examination, a hard or fluctuating mass may be defined. In one or other of the *culs de sac*, more frequently the posterior, the Fallopian tube or the ovary may be detected. If there is much peritonitis it may not be possible to isolate the uterus. Anatomically speaking, the tumour is always bilateral, but this does not mean that, clinically, symptoms are present on both sides. The diagnosis is often doubtful, but the presence of a tumour alone justifies recourse to laparotomy. He operates through an incision, 8 centimètres long, and ligatures the tube as close to the uterus as possible, arresting the oozing with irrigations of hot water.

ALFRED S. GUBB.

578. *Duke on a New Operation for Repair of Lacerated Perinæum.*—In the *Med. Press and Circular*, May 1888, p. 483, Mr. Alex. Duke desires to bring before the notice of gynæcologists an

operation he has designed for the restoration of a lacerated perinæum. The patient is placed, under an anæsthetic, either in the lithotomy or Sim's position ; the left index finger being introduced almost its entire length into the rectum, a long straight double-edged bistoury is made to pierce the tissues in front of the anus at right angles to the vulva ; and, guided by the finger in the rectum, is made to penetrate the septum for 2½ inches upwards, the incision being enlarged laterally to 2 inches at least as the knife is withdrawn. On the two points of incision being pressed together from side to side a lozenge-shape opening appears, and when all the sutures required have been introduced and properly adjusted and approximated, the two cut surfaces are brought into direct opposition. The sutures are introduced by a strong cycle-shaped needle with eye in point mounted on handle, strong silver wire being the best, and introduced in the usual manner. On pulling the ends of these sutures together it is at once evident where an additional stitch is necessary. When the operation is complete it will be found that the septum has gained considerably in thickness. The sutures should be left in for three days, then, if the union appears good, the wire can be cut and left *in situ* for another day or two. Dr. More Madden has given this operation a trial and is much pleased with the results he has obtained. The advantages claimed for this method are :—1. Simplicity of performance. 2. Freedom of any risk from septicæmia, as the incision during healing is not open to admit any discharge from the vagina or rectum. 3. There is no loss of tissue, and consequently no harm is done should the operation fail.

RICHARD NEALE, M.D.

579. *Lindner on Floating Kidney in Woman.*—Dr. Lindner is of opinion that, contrary to accepted ideas, floating kidney is very common in woman. About one in six of the female sex appears, according to Dr. Lindner, to be subject to this anomaly. He lays great stress on the patient's position during examination. The medical attendant should, he thinks, always stand to the patient's right, placing his right hand on the front of the abdomen towards the lumbar region and pressing the left against the loins on the same side, so as to push the kidney forwards. The patient should then be placed on the opposite side with her knees drawn up ; by sharply shaking her body the kidney, if movable, will fall forwards. In some cases, Dr. Lindner did not detect the abnormality till after repeated examinations. Floating kidney may cause or complicate neurotic conditions in women, but Dr. Lindner is opposed to operations. He advocates a method of bandaging so as to hold the kidney in its proper position. Nephrorraphy or nephrectomy is only justifiable when the patient is in danger through this malformation. He has collected the records of thirty-six nephrectomies and twenty-nine nephrorrhaphies. Dr. Lindner also relates twenty-four cases where his palliative treatment, by bandaging, has proved successful. [Dr. Niehans maintains that a special truss is superior to any form of bandage.—*Rep.*]

580. *Peckham on the Effect of Wormian Bones in Childbirth.*—Three cases observed by Dr. Peckham at the New York Hospital for Women and Children appeared to prove that Wormian bones in the posterior fontanelle, when of considerable size, might exert a detrimental, if not fatal, influence upon the child. The mothers were all primiparæ, and there was nothing abnormal either in the measurements of the maternal pelves or in the diameters of the heads of the infants. The presentations were in all the cases left occipito-anterior. The labours progressed slowly but normally through the first stage, but the second stage was very slow. Instruments were not used, as there was an expectation throughout that the labours would terminate naturally. The irregularity of the fontanelle gave rise, in the first two cases, to confusion in determining the presentation ; in the third, Dr. Peckham, through previous experience, had no difficulty in discovering that the posterior fontanelle contained Wormian bones. All three children were stillborn. One of the fœtal skulls was figured in Dr. Peckham's paper. Two triangular Wormian bones were represented, with their bases towards the occipital bone, and their apices close to the posterior superior angles of the parietals. A vertical suture, continuous with the sagittal, separated them in the middle line. In this respect these Wormian bones differed from the true interparietal bone said to exist in 20 per cent. of the skulls of the ancient Incas of Peru. Cuvier and others have shown that the latter is not a Wormian bone ; it arises from the normal fusion of the two upper osseous centres of the occipital portion of the occipital bone, with subsequent failure of their normal coalescence with the two lower centres. In Dr. Peckham's two remaining cases the Wormian bones were arranged as in the first. They appeared to prevent the overlapping at the sutures, and at the time when the pressure was greatest—that is to say, at the second stage of labour—the contents of the cranium were probably injured. Dr. Peckham added that a practical question must arise in cases of this kind : Could the dangerous pressure be avoided by the prompt and early use of instruments ? The author calls upon obstetricians to be on the alert, so that more precise knowledge may be gained in respect to the effect of Wormian bones in childbirth.

581. *Kleinwächter on One-child Sterility.*—Out of 1,081 gynæcological cases Dr. Kleinwächter noted ninety where the patients had borne one child at a more or less distant period, and had remained sterile since, although still cohabiting with their husbands. In twenty-one of the cases the single pregnancy had ended before term. He divided the causes of this kind of barrenness into ten groups : 1. Sequelæ of inflammatory processes beginning during the puerperium. 2. Catarrhal endometritis. 3. Sequelæ of inflammatory processes traced to a non-puerperal origin. 4. Displacements of the uterus. 5. New growths in the uterus. 6. Constitutional sources of sterility established after the first pregnancy. 7. Impaired potency of the husband. 8. Excessive involution or atrophy of the uterus. 9. New growths in the ovary. 10. Uncertain or unknown causes. These groups are arranged in order of frequency. Forty-three were traced to uterine and extra-uterine pelvic inflammations ; that is, to the first three groups ; nineteen to displacements and tumours. Dr. Kleinwächter admitted that the causes grouped above as 2 and 4 were not proved in every case to be uncomplicated. He declared that the seven cases making up group 7 were well authenticated by the clinical history, the condition in question appearing to act in a positively deleterious manner on the genital apparatus of the woman. Under group 6 were included cases where anæmia, cachexia, obesity, or emaciation arose after the first pregnancy. Dr. Kleinwächter could come to no conclusions as

to treatment, since his cases could not readily be kept under observation after their discharge from hospital.

582. *Orthmann on Cancer of the Fallopian Tube.*—The records of this disease are very scanty. Kiwisch noted it in 18 out of 73 cases of uterine cancer; Dittrich only 4 times in 94 cases. Dr. Orthmann found but 13 cases of tubal cancer of any value for pathological study, many others being badly reported. In 9 the uterus, and in 4 the ovary, was the primary seat of disease. In 6 the disease attacked both tubes; in most of these cases the body of the uterus was cancerous (see Dr. J. Williams 'On Cancer of the Uterus,' Case 34). The cancerous growth may be seated either in the mucous membrane, the muscular coat, or the peritoneal investment. The medullary form of cancer is the most frequent. In its naked-eye features tubal cancer resembles papilloma of the tube, which is apparently non-malignant. Dr. Orthmann has observed three cases of tubal cancer almost within twelve months in Dr. A. Martin's practice. The first was primary papillary cancer of the tube in a woman, aged 46 (apparently the same as that which was reported by Dr. Orthmann in the *Centralbl. für Gynäkologie*, 1886, p. 816.—*Rep.*). In the second there was secondary tubal cancer, the primary disease being in the ovary. The patient was a woman, aged 51. The patient in the third case was 45 years old; she suffered from primary cancer of the ovary, and small carcinomatous nodules were observed on the outer surface of the tube. [The reporter exhibited a case of primary cancer of the tube, removed by Mr. Thornton, before the Pathological Society on May 1 (see *Brit. Med. Jour.* and *Lancet*, May 5, 1888). A case of sarcoma of the tube was reported by Dr. E. Senger, of Breslau, in the *Centralbl. für Gynäkologie*, 1886, p. 601.] In the discussion which followed the reading of Dr. Orthmann's paper, Dr. Ruge stated that he had never seen a case of primary tubal cancer. He had found that the secondary form most frequently followed carcinoma of the ovary. This fact was remarkable, considering how closely the muscular coat of the tube was related to the uterus; yet only once had he found the tube infected in cancer of the body of the uterus, and in that instance the disease involved not more than half an inch of the tube beyond its uterine extremity. Dr. Winter spoke of a case, which he had already reported, where a cancerous mass was found in the tube, the primary disease being situated in the ovary. Professor Olshausen described a case where he had removed tumours of both ovaries from an old woman. Each tumour 'displayed a peculiar laminated structure.' In the left tube lay a tumour, the size of a hazel-nut, which Professor Marchand declared to be an epithelioma. Professor Olshausen believed that the course of the lymph-current explained why secondary deposits were rarely found in the Fallopian tube in cases of ovarian cancer.

583. *Leopold on Cæsarean Section compared with Induced Premature Labour, Turning, and Perforation.*—Professor Leopold bases his work on the results of these different proceedings on cases of narrow pelvis in the Dresden Lying-in Institution. Each method is systematically reviewed by himself or his assistants. Dr. Korn relates forty-five cases where premature labour was induced. In thirty-five the mother recovered without fever, in nine there was a rise of temperature for two or three days, one died of sepsis. He thinks that in generally contracted flat pelves up to 3 inches conjugate, and in pelves without transverse contraction up to 2·7 inches, labour should be induced between the thirty-second and thirty-sixth week of pregnancy. When that period has passed, the working of nature may be awaited, and should it fail, the advisability of turning and extraction on the one hand, and forceps and perforation on the other must be considered. Dr. Löhmann reviews 107 cases, out of 5,916 labours, where internal version was performed. He commits the case to the natural efforts of the uterus, in generally contracted flat pelves, up to 3 inches conjugate, and in simple flat pelves up to $2\frac{3}{4}$ inches, as long as the child is of the medium size at full term. Otherwise turning should be attempted. In any such case where the result is fatal to the child, premature labour should be induced during future pregnancies. Dr. Präger has performed craniotomy seventy-one times during the past four years at the Dresden Institution. He is sure that craniotomy with strict antiseptic precautions gives far better results than Cæsarean section, being less dangerous to the mother. Professor Leopold gives his experience in the latter operation. He analyses the twenty-three cases of Sänger-Leopold Cæsarean sections performed during the last four years at Dresden. He admits that it is essentially a laparotomy and a serious operation even for experienced surgeons. It is a fine thing, he observes, to save mother and child, but when all necessary conditions cannot be fulfilled, the point is that perforation must be attempted early, if at all. After induced premature labour, the maternal mortality was 2·2 per cent.; after turning and extraction, 4·8 per cent.; after craniotomy, 2·8 per cent.; after Cæsarean section, 8·6 per cent. But the percentages of deaths of mothers from sepsis only were: after induced labour, 2·2 per cent.; after turning and perforation, 0· per cent.; after perforation, 0· per cent.; and after Cæsarean section, 4·3 per cent.; so that it is still this operation which slays the most mothers. Quite otherwise is it with the children. They were saved in 66·6 per cent. of the induced labours; 59 per cent. of the turning and extraction cases; and in 87 per cent. of the Cæsarean sections. The suturing of the uterus must be strictly carried out after the Sänger-Leopold method, so that the mother may be able to bear children again with safety.

584. *Homans on a Case of Ovariotomy in a Patient Eighty-two Years Old.*—The patient was a widow, her youngest child was 43. An abdominal tumour had been observed for about two years, and had grown rapidly during the last six months before operation. On January 28, 1888, it was removed, and was found to be a 'somewhat multilocular and papillomatous' cyst of the left ovary, weighing a pound and three-quarters, its fluid contents amounting to thirteen pounds. On the sixth day the temperature rose to 100°·5, but subsided on the next day, and the patient went home on March 2. [This case is the oldest on record where the patient recovered; but the assertion of Dr. Homans and Dr. Lorini, in the paper whence the above report is quoted, that no case of ovariotomy has been recorded where the patient was over seventy-eight is not correct. Dr. Miner (*Buffalo Med. and Surg. Jour.*, September 1866; *American Journal of the Medical Sciences*, vol. liii., 1867, p. 284) describes the removal of a multilocular ovarian tumour, weighing nineteen and a half pounds, from a woman

aged 82. The tumour had been observed for two years. She 'died fourteen days after the operation of diffused inflammation of the peritoneum.'—*Rep.*]

585. *Rosenthal on Uterine Moles.*—Dr. Rosenthal read before the German Medical Society of Philadelphia in February a good summary of the experience of authorities on this subject, adding some interesting clinical reports from his own practice. He divides moles into a spurious and a true class, the latter being subdivided into fleshy moles and vesicular or hydatiform moles. He denies that spurious moles represent an independent uncomplicated affection, and includes in this class membraneous dysmenorrhœal casts. True moles appear to be invariably the result of impregnation. Eight cases of fleshy mole are described. In one, the mole was the size of an adult head, and contained a small cavity bearing a small amount of fluid; his mole was delivered, together with the placenta, at the birth of a child at term. Dr. Alfred Wiltshire has already noted that a similar state of things occurred on the occasion of the birth of Béclard, the anatomist. Fleshy moles undoubtedly represent effusion of blood between one or other of the layers of the membranes. Dr. Rosenthal believes that they are more frequent than is generally supposed, being often confounded with simple miscarriage. Two cases of vesicular mole are described. In one, it occurred twice in a woman, aged 42, who had borne thirteen living children. In 1882 occurred her first molar pregnancy; since then she bore two living children, her twelfth and thirteenth. Sixteen months after the birth of the youngest Dr. Rosenthal removed a large vesicular mole, for the second time. Recovery was very tedious. He dwells on the serious nature of this form of molar pregnancy. [The author has collected the records of a large number of observers, but has unfortunately not availed himself of Dr. Priestley's Lumleian Lectures on the Pathology of Intra-uterine Death, which were published in full in the first volume of the *British Med. Jour.* for 1887.—*Rep.*] ALBAN DORAN.

DERMATOLOGY.

RECENT PAPERS.

586. CAMPANA.—On Prurigo. (*Viertelj. für Derm. und Syph.*, 1888, 2 Heft.)

587. CASPARY. (*Ibid.*)

588. DOYEN.—On the Treatment of Epithelioma and Lupus by Lactic Acid. (*Annales de Derm. et de Syph.*, No. 2, 1888.)

589. HOLLISTER.—On Treatment of Rodent Ulcer by Lactic Acid. (*Ibid.*, No. 3.)

590. WALLICH.—On Dermatitis from Iodoform. (*Union Méd.*, 1887; *Ibid.*)

591. TROUSSEAU.—On Iodoform Erythema. (*Ibid.*)

592. JAKOWSKI AND W. MATLAKOWSKI.—On Rhinoscleroma. (*Monat. für Prakt. Derm.*, No. 3, 1888.)

593. VEIEL.—On Recent Methods of Treatment of Eczema. (*Ibid.*, No. 4.)

594. UNNA.—On the Treatment of Lupus. (*Ibid.*)

595. TOMMASOLI.—On the Anatomy and Pathology of the Epidermis. (*Ibid.*, No. 5.)

596. NEUMANN.—On the Different Reproductive Foci of the Syphilitic Virus. (*Ibid.*, No. 6.)

597. MEYER.—On Inoculation of Tuberculosis by Ritual Circumcision. (*Ibid.*)

598. BERGH.—On the Dangers of Ritual Circumcision. (*Ibid.*)

599. TEBALDO FALCONE.—On Acute Hereditary (Angio-neurotic) Œdema. (Quincke.) (*Ibid.*)

600. UNNA.—On the Treatment of Alopecia Pityrodes. (*Ibid.*)

601. FINGER.—On the So-called Dissecting-room Wart. (*Ibid.*, No. 7.)

602. ROESEN.—On the Treatment of Callosities and Warts. (*Ibid.*)

603. GUNYRAT AND BROCA.—On the Erythema of Cholera. (*Ibid.*)

604. BARDUZZI.—On Possible Connection between Pityriasis Versicolor and Phthisis. (*Ibid.*, No. 8.)

605. TANSINI.—On Injections of Corrosive Sublimate in the Treatment of Lupus. (*Ibid.*, No. 8.)

606. VON DÜRING.—On Double Comedo. (*Ibid.*, No. 9.)

607. STEINTHAL.—On Tuberculosis of the Skin, caused by Inoculation and Auto-infection. (*Ibid.*)

608. RIEHL.—On Acute Circumscribed Œdema of the Skin. (Quincke.) (*Ibid.*)

609. CUTLER.—On a Case of Hyperidrosis. (*Jour. of Cut. and Genito-Urin. Dis.*, February 1888.)

610. OHMANN-DUMESNIL.—On a Case of Circumscribed Hypertrichosis in the Lumbar Region. (*Ibid.*, March.)

611. KADKIN, DR.—Concerning a Favourable Influence of Erysipelas on Syphilis. (*Rüsskaia Meditzina*, March 6, 1888, p. 143.)

612. ILÏÏN, DR. J.—On the Treatment of Psoriasis Vulgaris by Bromide of Arsenic. (*Rüsskaia Meditzina*, No. 48, 1887, p. 790.)

613. MÉRICOURT, DR. LERVY DE.—On the Contagiousness of Leprosy. (*Rev. Gén. de Clin. et de Thérap.*, May 24, 1888.)

614. HALLOPEAU, DR.—On Certain Abnormal Forms of Iodism. (*Rev. Gén. de Clin. et de Thérap.*, May 3, 1888.)

ART. 586.—*Campana on Prurigo.*—Professor Campana (*Viertelj. für Derm. und Syph.*, 1888, 2 Heft) considers that the pathology of prurigo is to be found in changes in the peripheral nerves. Whilst acknowledging that in many cases of neuritis there is no itching, he states that there are facts which show that in many cases of peripheral nerve change the prominent symptom is itching. In cases of prurigo he has found changes in the peripheral terminations of the nerves. Some of these lost their form and were thicker than usual. He relates a case of sarcoma of the skin in which itching followed sarcomatous changes in the nerves.

587. *Caspary on the Pathological Histology of Lichen Planus.*—Professor Caspary, in a paper read before the Dermatological Section of the recent Congress at Wiesbaden, published in the *Vierteljahrsschrift für Derm. und Syph.*, 1888, 2 Heft, remarks on the unsatisfactory nature of our present knowledge of the anatomy of lichen ruber and planus. He calls attention to the fact that in skin diseases which are clinically recognised as distinct, pathological histology assigns as their common anatomy cell swelling and cell accumulation in the adventitia with enlargement of the papillæ. He has himself investigated the microscopical anatomy in a series of cases in lichen planus. In the earliest papules the first appearances observed were cell infiltration in the most superficial layers of the cutis which does not reconcile itself with Auspitz's idea that the disease is epidermic in its origin. In the older papules he found a separation of the whole layer of the epidermis produced by the breaking down and disappearance of the sub-epithelial connective tissue.

The space thus created between the epidermis and connective tissue was filled with a vitreous coagulum, permeated by fine, fibrinous-looking threads in which only very few round cells were found. He states that these appearances have not been observed by him in any other skin-diseases. This space was not found in syphilitic lichen nor in lichen scrofulorum.

588. *Doyen on the Treatment of Epithelioma and Lupus by Lactic Acid.*—M. Doyen (*Annales de Derm. et de Syph.*, No. 2, 1888) records his experience of the method of Moorhof in treating epithelioma and lupus by lactic acid. Of three cases of lupus one was cured in three months, and the cure had been maintained for a year. Another, in which an apparent cure had taken place, was still under observation. The other patient was still under treatment. The author states that contrary to the remarks of Moorhof lactic acid does not absolutely spare the healthy skin, but by watching its action from day to day slough can be avoided. Lactic acid of the consistence of syrup is applied by means of absorbent cotton, and is allowed to remain in place from fifteen to twenty minutes. After being removed the part is carefully wiped with soft cotton. Before being applied the circumference of the part is protected by resinous plaster, or better by lanolin. The treatment is not painful, and applications can be made every day. When sufficient destruction seems to have taken place the part is washed with an antiseptic solution, and is dressed daily with an ointment of nitrate of silver. The cicatrices are smooth and rose-coloured, and gradually become paler without contraction; a result due to the fact that lactic acid only acts on the diseased products of the skin.

589. *Hollister on Treatment of Rodent Ulcer by Lactic Acid.*—Dr. Hollister (*Medical and Surgical Reporter; Annales de Derm. et de Syph.*, No. 3, 1888) reports a case in which he asserts that the application of lactic acid resulted in the speedy cure of a rodent ulcer.

590. *Wallich on Dermatitis from Iodoform.*—A patient (*Union Méd.*, 1887; *Annales de Derm. et de Syph.*, No. 3, 1888) had iodoform applied to the left forefinger, which had been bitten by a horse. At the end of a month the wound presented lesions similar to those which follow a burn in the second degree. The lesions rapidly involved the whole hand. The dressing being continued (consisting of iodoform gauze covered with vaseline and wadding), the same appearances showed themselves on the forefinger and middle fingers of the other hand, which were also dressed with iodoform. Several days later, on the forearms and the lower parts of the two arms, large flat bullæ formed on red patches. On the thorax and abdomen a measly-like eruption formed. The iodoform gauze was then replaced by carbolic gauze, and in twenty-four hours the measly eruption disappeared, the vesicles on the forearms became flat, and the lesions on the hands similar to burns ceased to secrete pus. All the symptoms soon entirely disappeared.

591. *Trousseau on Iodoform Erythema.*—The author (*Union Méd.*, 1887; *Annales de Derm. et de Syph.*, No. 3, 1888) relates that a boy, aged 11, suffered from an ulcer of the eyelid, which was dressed by an application of iodoform. The next day the whole of the treated side of the face was swollen and red. The skin was violet-coloured, and covered at some places with small bullæ, some of which had burst and allowed a thick serum to escape. The swelling was limited abruptly by prominence of the skin. One of the submaxillary glands was swollen. There was considerable suffering. Under the application of boric-acid dressings the symptoms rapidly disappeared.

592. *Jakowski and Matlakowski on Rhinoscleroma.*—The authors (*Monat. für Prakt. Derm.*, No. 3, 1888) state that each bacillus of rhinoscleroma has a special capsule. Rarely there are two bacilli in one capsule. There are also cocci associated two or three in a capsule. On account of the resemblance of the cocci to the cocci of pneumonia, the authors inoculated mice with the cultivated organism. Out of twelve mice so inoculated only one died, and the result goes to show that the coccus of pneumonia is not identical with the organism of rhinoscleroma.

593. *Veiel on Recent Methods of Treatment of Eczema.*—Dr. Veiel (*Monat. für Prakt. Derm.*, No. 4, 1888) rejects viola tricolor, mercury, iodine, ergotine, and calcium sulphide as useless in the treatment of eczema. Arsenic he sometimes uses in combination with external treatment. In one case he has known it produce acute eczema. In the scrofulous eczema of children he finds cod-liver oil internally excellent, but externally as of no more use than any other fat. In cases of severe itching he gives chloral, iodide, and bromide of potassium, and sometimes even subcutaneous injections of morphia. Internally, carbolic acid is useless. In acute eczema, before it becomes moist, he praises zinc gelatine, and, above all, the zinc glycerine gelatine of Unna. When zinc gelatine is not borne he covers the parts with cold, dry starch powder contained in gauze bandages. These pillows, full of starch powder, are kept cold by India-rubber bottles filled with ice and salt, which are by frequent refilling kept cold. Of the pastes, he recommends Lassar's zinc salicylic paste, and praises the excellent zinc muslin ointments and the lead muslin ointments of Beiersdorf.

594. *Unna on the Treatment of Lupus.*—As a useful and efficacious remedy against lupus nodules, and one that requires little preparation, Dr. Unna (*Monat. für Prakt. Derm.*, No. 4, 1888) recommends the use of small wooden toothpicks, covered with wadding soaked in a fluid of the following composition:—Perchloride of mercury, 1; carbolic acid, or creosote, 4; spirit, 20. At each sitting, beginning on the outer border, about ten small lupus nodules are selected for treatment. These are cut with a lancet to about the depth of 2 millimètres, and immediately bored with a toothpick, covered with wadding and soaked in the fluid. The wadding on the end of the toothpick is inserted, and by a turning movement the fluid is brought in contact with the diseased tissue. After two or three days little is to be seen either of the small holes or of the lupus nodules that have been treated, and ten new points are selected. Dr. Unna states that this treatment is more advantageous than the old custom of boring with solid nitrate of silver, being less painful and more efficacious.

595. *Tommasoli on the Anatomy and Pathology of the Epidermis.*—The author (*Monat. für Prakt. Derm.*, No. 5, 1888) believes that the reproduction of epidermic cells takes place in two ways—through karyokinesis, which he considers associated with physiological and pathological conditions that lead to a succulent condition of the tissues with hyper-

æmia, but also that new cells are formed by the transformation of white blood-corpuscles into epithelial cells. The latter mode of formation he has found in callosities. Tyloma is produced by pressure, or by any other cause which lowers the nutrition of the prickly cell-layer, whereby more rapid cornification and diminished desquamation of epidermic cells take place. The callosity which is thus formed presses like a foreign body on the subjacent parts, and leads through hyperæmia to the secondary proliferation of epithelium. The papillæ which immediately underlie the enlarged callosity are atrophied, while those on the border of it are enlarged.

596. *Neumann on the Different Reproductive Foci of the Syphilitic Virus.*—Professor Neumann (*Monat. für Prakt. Derm.*, No. 6, 1888) believes that in portions of the skin and mucous membrane of certain syphilitic individuals which appear perfectly healthy, tissue changes can be observed microscopically. In all these places, although far removed from the original sclerosis and affected lymphatic glands, the contagium can remain for long periods fixed in exudation cells.

597. *Meyer on Inoculation of Tuberculosis by Ritual Circumcision.*—The author (*Monat. für Prakt. Derm.*, No. 6, 1888) states that a child, who had an ulcer on the frenulum and indurated inguinal glands, was treated for specific disease without result. The glands suppurated, and tubercular infection was diagnosed. Tubercle-bacilli were found. The inoculation was supposed to have been produced in circumcision by the operator sucking the bleeding wound.

598. *Bergh on the Dangers of Ritual Circumcision.*—In a discussion (*Monat. für Prakt. Derm.*, No. 6, 1888) in the Medical Society of Copenhagen on the Transmission of Syphilis, introduced by Professor Bergh, Dr. Salomonsen testified not only to the transmission of syphilis by the operator in circumcision, but also of tuberculosis, and urged that official measures should be taken to insure that the sucking of the wound should be replaced by some safer and more rational procedure.

599. *Tebaldo Falcone on Acute Hereditary (Angioneurotic) Œdema (Quincke).*—The author (*Monat. für Prakt. Derm.*, No. 6, 1888) describes the case of a seven-years-old boy who was seized suddenly with pains in the head and limbs, want of appetite, sickness, and diarrhœa without fever. After several hours a swelling took place on the right forearm. At the same time there were several circumscribed swellings on the backs of the hands. The colour of the skin was unchanged. The grandfather of the boy had suffered from frequently recurring attacks of the same affection..

600. *Unna on the Treatment of Alopecia Pityrodes.*—Dr. Unna (*Monat. für Prakt. Derm.*, No. 6, 1888) recommends for the treatment of this disease rubbing the head at bedtime with an ointment of resorcin, 1 in 15. The head is then to be covered by an impervious cap, the ointment to be rubbed off in the morning with a dry cloth. Once a week the scalp to be washed with alcoholic solution of soft soap.

601. *Finger on the So-called Dissecting-room Wart.*—The author (*Monat. für Prakt. Derm.*, No. 7, 1888) reports the case of a man, 41 years of age, in whose body tubercle of the lungs, larynx, intestine and kidneys were found. On the left forearm and backs of the hands were found five warty growths presenting all the characters of dissection warts. In the centre of the two largest were scars. These warty places had existed for twenty years, and presumably antedated the other symptoms of tuberculosis. Microscopical examination showed not only the ordinary anatomical appearances of miliary tubercle, but also tubercle-bacilli and cocci; similar results to those which have been found and described by Karg, Riehl, and Paultauf.

602. *Roesen on the Treatment of Callosities and Warts.*—The author (*Monat. für Prakt. Derm.*, No. 7, 1888) has found a quicker and more energetic action through salicylic acid in substance than when used dissolved in collodion. After he has moistened the epidermic structures with solution of boric or salicylic acid, he covers them with a thick layer of pure crystallised salicylic acid. On the top of this he places fourfold moistened boric lint. A piece of gutta-percha tissue fastens the whole in position. If the callosities or warts are not too large, the bandage is allowed to remain five days, after which the structures are found shrunken and completely separated from their base, which is represented by an uninjured skin. When the part to be acted upon is unusually thick, as, for example, in the hypertrophic toe-nail, the bandage is renewed on the fifth day or is allowed to remain in position ten days.

603. *Gunyrat and Broca on the Erythema of Cholera.*—The authors (*Monat. für Prakt. Derm.*, No. 7, 1888) have given a minute description of the erythema which accompanies the onset of cholera. The rash appears in the form of small, round papules from two millimètres to three millimètres in diameter, which are of a deep red. The borders are not marginated, and are very slightly raised above the level of the skin. If the epidermis is very thick, instead of a papule a macula is seen. The papules increase very quickly, and in the first twenty-four hours they are found in groups (*en corymbes*). In addition to the groups discrete papules are found over the body. The rash ends with a very fine desquamation. When the cheeks and mucous membrane of the pharynx are affected they are seen sometimes spotted, sometimes uniformly red. The diagnostic points are sufficient to distinguish this rash from that of the early stage of measles and scarlatina.

604. *Barduzzi on Possible Connection between Pityriasis Versicolor and Phthisis.*—The author (*Monat. für Prakt. Derm.*, No. 8, 1888) took well-washed scales from pityriasis patches and introduced them into the tracheæ of rabbits. The animals became regularly affected with tuberculosis of the lungs, and this irrespective of whether the detritus was taken from the phthisical patient in an early or later stage of the disease. Injections were also made into the subcutaneous tissue and into the peritoneum of rabbits. The result was always the development of tubercular nodules. The author quotes Dugonet and Hericourt as confirming his experiments.

605. *Tansini on Injections of Corrosive Sublimate in the Treatment of Lupus.*—The author (*Monat. für Prakt. Derm.*, No. 8, 1888) relates the case of a young woman who had been affected over two years with lupus hypertrophicus of the point of the nose, which had resisted all ordinary treatment. He prepared the following solution:—Corrosive sublimate, 0·50; chloride of sodium, 1·00; distilled water, 100·00. The first injection was made with a few drops of this solution without any particular result. Four days later two further injections were made

with a stronger solution, the proportion of corrosive sublimate and salt being doubled. Thereon there appeared local swelling and slight painless œdema of the face. After two days the œdema and the tumefaction of the nose disappeared. Later, at different intervals, further injections were made, partly into the middle of the affected part and partly on its periphery, the reaction in no case being extreme. Even after the first injections an improvement took place, the skin over the affected part becoming paler and smoother. The nose soon returned to its normal condition.

606. *Von Düring on Double Comedo.*—As the result of microscopical investigations into the nature of double comedo Von Düring (*Monat. für Prakt. Derm.*, No. 9, 1888) has arrived at the conclusion that comedo, whether double or single, is the result of injury or is a process analogous to ulceration of the affected part, and that every comedo is connected with a sebaceous gland in a considerable state of atrophy.

607. *Steinthal on Tuberculosis of the Skin caused by Inoculation and Auto-infection.*—The author states (*Monat. für Prakt. Derm.*, No. 9, 1888) that a woman who was in the habit of washing the clothes of her phthisical husband acquired tuberculosis of the skin of the hands. In a second case a boy, 4 years old, had an operation performed on his nose on account of periostitis. The skin on the edge of the wound became the seat of lupus. There were scars of previous lupus on other parts of his body. An enlarged gland on the neck was removed, and found by the microscope to be tubercular. In a third case a man, 30 years old, suspected to be phthisical, was suffering from fungoid ulceration of the ankle; where the splint pressed on the skin over the external condyle, tuberculosis of the skin developed. In another case, in which there was disease of the dorsal vertebræ, the skin became affected on the neck, corner of the mouth, and on the nails of the third and fourth fingers of the right hand. In a portion of skin excised from the affected part of the neck, tubercle and tubercle-bacilli were found.

608. *Riehl on Acute Circumscribed Œdema of the Skin (Quincke).*—Riehl (*Monat. für Prakt. Derm.*, No. 9, 1888) showed to the Society of Physicians of Vienna two patients suffering from this disease. The first had suffered for three years from recurrent attacks of œdema of the cheek, which suddenly appeared. The second patient suffered from œdema of the upper eyelids. From frequent relapses in this patient the upper eyelids hung down like curtains. Riehl remarked on the characters of this œdema, which is never inflammatory, and on the different resistance of the affected part of the skin in different cases. The only sensation is that of slight itching. Other cases are known in which great depression, frequent vomiting, and diarrhœa exist during the attack. In connection with this affection of the skin, Gruss reported on a case of retrobulbar œdema which occurred suddenly in a healthy man, simultaneously with violent headache, giddiness, retching, and slowness of the pulse. There was considerable protrusion of the affected eye with œdematous swelling of the eyelid and conjunctiva. The retina was pale, the papilla projecting forward; movement of the eyeball was free. After about twelve hours the appearance suddenly ceased, but reappeared fourteen days afterwards whilst the patient was violently excited. There were three relapses. A third attack came on after violent exercise. Meynert stated that a similar process took place in the brain, symptoms being produced by acute circumscribed œdema, nothing being found after death but well-marked œdematous swelling. In another case which was also seen by Bamberger the symptoms were almost those of meningitis.

609. *Cutler on a Case of Hyperidrosis.*—The author (*Jour. of Cutaneous and Genito-urinary Diseases*, February 1888) states that the patient was a young woman, aged 22, with an exceptionally good family history. Prior to her first menstruation she noticed that her hands perspired excessively. The area of sweating has always been confined to the palmar surfaces of the hands and fingers, not appearing on the backs of the hands nor above the wrists. The affected parts are slightly cool to touch, the skin thickened and sodden, not wrinkled. Circulation is good; nails normal. The quantity of secretion is enormous. When the hands are held down with the fingers apart drops of sweat will fall every second, forming pools of water on the floor. From one hand about an ounce of water can be obtained in five minutes. After wearing kid gloves for an hour, water can be wrung out of them, while the kid is soaked through. To prevent the water from ruining her dresses she must constantly carry a handkerchief in each hand, and in an hour's time they are so saturated that water may be wrung from them. At night her hands must be encased in towels to prevent the sheets from being wet through. With all this loss of water from the system, the thirst is but slightly increased or the urine diminished. Chemically, the secretion resembles ordinary perspiration. Treatment has failed, except in correcting the functional uterine disorder. Such agents as bismuth, tannic and salicylic acid, belladonna, atropia, ergot, tonics, &c. have been utterly worthless to control the abnormal condition.

610. *Ohmann-Dumesnil on a Case of Circumscribed Hypertrichosis in the Lumbar Region.*—The author (*Journal of Cutaneous and Genito-urinary Diseases*, March 1888) states that the patient served as an ordinary seaman on board ship at the age of 16, and that he one day fell from the shrouds to the deck, sustaining very little injury. He was 'laid up' for a few days, no local applications being made. A little while after the accident he noticed a strange growth of hair in the lumbar region, some little distance above the internatal cleft, the area involved being about two inches by three and one-half. The hair which grew here was curly, of a nut-brown colour, soft and silky in texture, quite fine, and eight inches in length at its longest part. The hairs were quite numerous, being almost as closely implanted next each other as upon the scalp. No other portion of the body was affected in a similar manner. The patient stated that he had never applied any means whatever for the removal of the hair. As the hair grows inconvenient by reason of the length, he simply cuts it off with scissors. The extreme length to which it will grow has not been ascertained by him. He asserted, with how much truth the author was unable to state, that he had had this growth three feet in length, having deferred cutting it in order to see how long it would grow. It is hardly probable that this length was attained.

G. THIN, M.D.

611. *Kadkin on the Influence of Erysipelas on Syphilis.*—In the *Rüsskaia Meditzina*, March 6, 1888, p. 143, Dr. Kadkin, of Piatigorsk, details a

remarkable instance of beneficial action of erysipelas on syphilis. The patient, an officer, contracted syphilis in July 1885; in September there appeared papulæ around his anus and ecchymata over the body. In spite of a persevering treatment by mercurial remedies, both externally and internally, fresh pustules over the face and faucial ulcers soon added themselves; while in February 1886 his nose became greatly swollen and studded with tubercles, which rapidly underwent exulceration. At the same time a perforating ulcer of the nasal septum made its appearance. Not the slightest improvement could be obtained. Notwithstanding an unabated use of corrosive sublimate in pills and under the skin, grey ointment, and iodide of potassium, progress remained unchecked, fresh tubercles and ulcers continuing to come out. In August 1886 erysipelas in the neighbourhood of a nasal ulcer supervened, rapidly spreading over the whole nose, right eyelid, and right frontal and temporal regions. The attack was said to be mild, resolution being complete in ten days. About this time 'a striking improvement in the state of the patient's nose was noticed. Redness and swelling rapidly decreased, the ulcers assumed a healthier appearance and cicatrised rapidly, and the tubercles underwent resorption. About the beginning of October only trifling tumefaction and redness and but a minute ulcer on the nasal septum remained.' On examining the gentleman in January 1887 his 'nose was found to be quite normal as regards its shape and colour, the only traces of the disease being pale, somewhat depressed, furrow-like scars.' No relapse occurred up to the date of the communication; more than a twelvemonth has elapsed since the patient's recovery. Dr. Kadkin believes that a favourable influence of erysipelas, as well as of all febrile diseases generally, on syphilis should be attributed to a high febrile temperature, which is thought to be 'adverse to the vitality of the syphilitic microbe' [which 'specific' microbe, by the way, still waits its lucky discoverer, since the main candidate for this office (Lustgarten's bacillus) has been shouldered out by some recent researches of Dr. Aristarkh I. Smirnoff, of Kazan; see the *Provincial Medical Journal*, June 1888]. Dr. K. M. Lisovsky, of the Dïnabürg Military Hospital, also contributes a case similar to that of Dr. Kadkin (*Proceedings of the Dïnabürg Medical Society* for 1883–84, vol. ii. 1885, p. 115). The case refers to an artillery soldier who was admitted with a preputial hard chancre, roseola over the body, sore-throat, faucial mucous patches, and ear-ache. In spite of two hypodermic injections of corrosive sublimate (one-seventh of a grain each), made in the course of six days, the symptoms grew worse; while there soon supervened a slight fever, considerable swelling of the uvula and the whole faucial mucous membrane, nasal and aural catarrh, and enlargement of the submaxillary and parotid glands. About the twelfth day after his admission bulbous erysipelas of the left auricle with high fever (40° C.) made its appearance. In two days the process spread over the left side of the face and neck to pass into resolution four days later. Not a trace of any syphilitic symptoms could be discovered by this time, every one of them having disappeared just after the onset of erysipelas. When seen three months later, the man remained still free from any syphilitic signs. Dr. Lisovsky adds that, on the other hand, he happened to see three cases of relapse of syphilis after an acute febrile disease—typhoid and typhus fevers and croupous pneumonia. Dr. Krom, of Dïnabürg, says (*ib.* p. 114) that he met a case where purulent conjunctivitis had disappeared suddenly and completely immediately after the efflorescence of variolous pustules. [As far as the Russian literature is concerned, cases of the disappearance of syphilis from febrile diseases were reported also by Drs. Fedotoff (The LONDON MEDICAL RECORD, December 1883, p. 512), Volsky (*ib.* July 1887, p. 308), Iankovsky, Petrovsky, Cudzinowicz, Eltzinsky, Eiland, Lavrentïeff, Behrenson, and Spiro (*Provincial Medical Journal*, February 1888, p. 84).—*Rep.*]

612. *Iliïn on Bromide of Arsenic in Psoriasis Vulgaris.*—In the *Rüsskaia Meditzina*, No. 48, 1887, p. 790, Dr. J. Iliïn, of Warsaw, writes that in two obstinate cases of psoriasis vulgaris he has employed Professor Corbett's method of treatment, and obtained most brilliant results. The method consists in the internal use of a solution of bromide of arsenic (one grain) in alcohol (two ounces) with simple syrup (eight ounces), the dose being a teaspoonful, taken two or three times daily (after meals). One of his patients was a medical assistant, aged 27, who had suffered from intense psoriasis (of his back and limbs) since his childhood, in spite of the use of Fowler's solution, ointments with sulphur and tar, mineral baths, &c. The administration of bromide of arsenic brought about, in the space of a fortnight, a profuse shedding of scales, disappearance of deep bleeding fissures, &c. a complete and permanent cure ensuing shortly afterwards. Another case is that of a soldier, aged 22, who when first seen by Dr. Iliïn (in the seventeenth month of the affection) was found to be covered literally from head to foot with dry, shining, white, fissured, and bleeding scaly patches, partly isolated, partly forming large and thick layers. On gently removing a scale there could be seen a surface studded with bleeding points. The patient suffered from loss of appetite and sleep, was despondent, and generally felt very ill. He feared to move a limb, since every movement gave rise to fresh painful and bleeding fissures. A previous course of treatment by iodide of potassium and Fowler's solution had failed to afford the slightest relief. As in the former case, the use of bromide of arsenic was followed in a fortnight by a strikingly profuse desquamation, a rapid healing of fissures, and, shortly after, by a complete restoration to health. The only trace left by the affection was (in both of the cases) a brown discoloration at the spots once affected. [Professor Corbett extols bromide of arsenic in many other cutaneous diseases, especially in acne vulgaris of a nervous (reflex) origin, in pruritus hiemalis, &c. *Vide* the *New York Medical Record*, April 17, 1886.—*Rep.*]

V. IDELSON, M.D.

613. *Méricourt on the Contagiousness of Leprosy.* In discussing the subject of the contagiousness of leprosy the author criticised the deductions drawn from the epidemic in the Hawaiian Islands in favour of its communicability. He attributes the spread of leprosy in those islands to the enfeeblement of the race consequent on syphilis, tuberculosis, measles, and alcoholism. He maintained that leprosy was often, though not necessarily, hereditary, and this was especially marked in the Sandwich Islands. He objected to the sequestration of leprous patients on the ground that it did nothing towards checking the spread of the disease, while patients were often condemned on a faulty diagnosis. The only effective

remedy against leprosy, in his opinion, would be increased attention to hygiene.

614. *Hallopeau on Certain Abnormal Forms of Iodism.*—After alluding to the iodic purpura recorded by Fournier and to the albuminuria and œdema of the glottis recorded by Huchard, the author mentioned the case of a syphilitic patient who developed purpura after taking from four to six drachms of the iodide of potassium daily, followed by fleeting paralysis, due to a sort of cerebral purpura, which disappeared on the cessation of the treatment. In other cases, subcutaneous nodules formed, generally tender on pressure, principally on the limbs, varying in size from a filbert to an egg. Miss Bradley collected twenty-five cases of bullous eruption due to the ingestion of the iodide, and Dr. Hallopeau quotes a case of atrophy of the skin, consecutive to an attack of this kind, resulting in blindness and disfigurement. In other cases the parotid glands were affected, and in one case the palpebral glands were involved. A case is recorded of acute pulmonary œdema, apparently due to the iodine, and a special form of eczema has been remarked on several occasions. ALFRED S. GUBB.

SYPHILOGRAPHY.

RECENT PAPERS.

615. HALLOPEAU.—On Angina Pectoris of Syphilitic Origin. (*Annales de Derm. et de Syph.*, No. 12, 1887.)

616. GOLDZIEHER.—Syphilitic Conjunctivitis. (*Brit. Med. Jour.*, March 17, 1888.)

617. NEUMANN.—Excision of Primary Sores and Enlarged Glands in Syphilis. (*Brit. Med. Jour.*, May 19, 1888.)

618. TRZCINSKY.—On the Treatment of Syphilis by Deep Subcutaneous Injections of the Yellow Oxide of Mercury. (*Viertelj. für. Derm. und Syph.*, No. 4, 1887, and *Centralbl. für die gesammte Therapie*, November 1887.)

619. ARANJO, DR. SYLVA.—On the Salicylate of Mercury in Syphilis. (*Bull. Gén. de Thérap.*, Feb. 29, 1888.)

620. MAURIAC, DR. CH.—On the Treatment of Gonorrhœa. (*Rev. de Thérap.*, May 15, 1888.)

621. STIRLING.—On some Rare Complications of Gonorrhœa. (*Australasian Med. Gazette*, February 1888, p. 115.)

ART. 615. *Hallopeau on Angina Pectoris of Syphilitic Origin.*—This, M. Hallopeau remarks, must be considered a rare affection, for among recent special works that of Rumpf (*Die syph. Erkrank. des Nervensystems*) appears to be the only one that mentions it. But syphilitic angina may perhaps be found to be not so uncommon when attention has been drawn to the subject. Of two hundred cases of angina pectoris observed by M. Huchard (*Bull. et Mém. de la Soc. Méd. des Hôpitaux*, 1887), for example, forty-three were cured by treatment with iodides, and M. Hallopeau finds it difficult to believe that some at least of these were not syphilitic. But all the cases given by Rumpf as angina pectoris cannot be definitely accepted. Almost all of them, indeed, are examples of pain and dyspnœa in connection with valvular disease of the heart or tumour of the myocardium. The symptoms are those of heart-disease, and do not constitute an idiopathic affection, like the true angina pectoris. Of this kind also are the cases recorded by Ricord, Lancereaux, Virchow, Teissier, Balzer, and Ehrlich. Angina pectoris is not to be looked upon as due to syphilis simply because the patient happens to be syphilitic, and it seems very doubtful whether the following case of Rumpf's can be considered really syphilitic. The patient was a woman, aged 64, who had had an indurated chancre thirty years before. Latterly she had been attacked by a feeling of oppression in the region of the heart accompanied by shooting pains which came and went suddenly without extending down the arm. At the autopsy there were found some small scars in the substance of the ventricles, together with atheroma of the coronary arteries and their branches and slight dilatation of the aorta. Iodide of potassium had been given without effect. Another case of Rumpf's, however, is satisfactory:—A man, aged 29, had attacks of intense pain in the precordial region. The pain was of a darting kind and extended down the back and the left arm, and was accompanied by a feeling of pressure and constriction and intense anxiety. At the end of the attacks there was palpitation, and the pulse was raised to 120 per minute. The seizures at first came on only rarely, then every other day, and latterly nearly every day, most frequently in the afternoon. The man had had a sore six years previously, followed by eruptions on the skin and sore-throat. Examination of the heart revealed nothing abnormal beyond accentuation of the second sound over the pulmonary artery. Under treatment by iodide of potassium and cold applications complete recovery took place, and when the man was seen by Rumpf several years afterwards there had been no return. The rapid cure under iodide, remarks M. Hallopeau, and the history of syphilis in this case leave little doubt as to the syphilitic nature of the affection, especially as the age of the patient would exclude the existence of atheroma of the coronary arteries. Another remarkable case of a similar kind is recorded by Vitone (*Il Morgagni*, 1886):—A man, aged 34, contracted syphilis four years ago; one year later he suffered from deep lancinating pains in the lower limbs, and in April 1885 had attacks of pain in the precordial region, the left side of the chest, and the left arm. The attacks occurred several times daily, and were accompanied by difficulty of breathing and a feeling of suffocation. Their duration was short and they were sometimes attended by increased heat and hyperidrosis of the whole of the left side of the body. The attacks came on more frequently before than after a meal, and during the seizure the patient became pale and pressed his hand to his chest. If he happened to be walking he was obliged to stop. Examination of the heart revealed nothing abnormal. The man had suffered from the effects of malaria as well as from syphilis; but while quinine had no effect whatever on the attacks of angina, they rapidly yielded to the subcutaneous injection of mercury, and on the sixth day of this treatment ceased altogether. Vitone has since published a second case of cardiac trouble due to syphilis (*La Terapia Moderna*, 1886). There were attacks of pain in the cardiac region which came on several times a day, without any appreciable signs of organic disease. Cure resulted in this case also under mercurial treatment; but the resemblance to angina pectoris was not so well marked as in the previous case. M. Fournier has also told the author of a case of a young woman who was suffering from secondary syphilis, and who had symptoms

like those of angina pectoris, which rapidly disappeared under the influence of mercury. The following case was under M. Hallopeau's own care. A gentleman, aged 36, contracted syphilis in 1867, which ran an ordinary course under treatment by mercury and iodide of potassium. From 1871 there were no more symptoms until August 19, 1878, when the patient was awakened during the night by an agonising sensation in the region of the heart, and radiating towards the left shoulder. The attack lasted only a few instants. On the 20th there were two similar attacks in the night and one during the day. Examination of the heart revealed nothing abnormal, and the general health was good. The patient was of arthritic diathesis, and had suffered from asthma up to the age of 25, and since then had had subacute rheumatism and gout. He was also subject to attacks of migraine, eczema, and piles, and had been overworked of late. The cardiac attacks always began with precordial oppression, accompanied by abnormal sensations, which the patient described as disagreeable and distressing rather than actually painful; they radiated towards the left upper limb, sometimes extending only as far as the shoulder, sometimes to the elbow, and sometimes to the fingers. On each of the two following days there were four attacks. On the 23rd a blister was applied over the heart, and one drachm of bromide of potassium daily was prescribed. There was no further attack until the 30th, from which date, with the exception of an interval of five days, the seizures occurred sometimes daily and sometimes several times a day in spite of treatment of various kinds, including galvanism and the actual cautery, till October 15. During this period the seizures had from time to time altered in character, various other morbid sensations—for example, a feeling of constriction in the neck and epigastrium, shivering of one side of the body, giddiness, numbness, and paresis of the right foot—having been in turn complained of. On October 15 iodide of potassium (45 grains) was prescribed. From this time the attacks diminished, and six days afterwards ceased altogether. When M. Hallopeau saw the patient nine years later there had been no return. The author ends his paper with the following propositions:—1. Syphilis in its secondary and tertiary stages may give rise to attacks of angina pectoris. 2. The attacks may form typical examples of that affection. 3. In some cases they are complicated with other disorders of innervation connected with reflex excitation of the vasomotor nerves, and thus give rise to abnormal sensations of cold or heat in one half of the body, with shiverings and hyperidrosis, or to paresis by ischæmia of the motor centres. 4. The attacks are connected with the development of specific neoplasms in the course of the cardiac plexus or in its immediate neighbourhood. 5. They may change their character according to the evolution of the lesions, by their disappearance from the points first attacked, and by their extension to other branches of the sympathetic. 6. They may be cured in a few days by mercury or iodide, and may never return.

616. *Goldzieher on Syphilitic Conjunctivitis.*—The Vienna correspondent of the *Brit. Med. Jour.* states that in a communication on this subject to the Royal Society of Physicians of Buda-Pesth Dr. Goldzieher related two cases which showed the existence of a sort of granular ophthalmia due to syphilis. The first case was that of a man, aged 32, who had contracted syphilis six years before, and had suffered from chronic iritis since that date, so that iridectomy had to be performed. For the last few months he had had inflammation of the conjunctiva, which had been treated for a long time. On admission into hospital erythema and diffuse swelling of the eyelids and granulations in the mucous membrane were found, as well as swelling of the lymphatic glands in the region of the ear and the neck. After energetic treatment by mercurial inunction for four weeks the conjunctiva regained its normal appearance and the man was discharged cured. The second case was that of a man, aged 26, who had contracted syphilis two years previously. Six months before admission he had been attacked with conjunctivitis of the left eye and, like the first patient, had been treated without success by applications of nitrate of silver, sulphate of copper, &c. He presented exactly the same changes in the conjunctiva as the first case, and, in addition, deep keratitis, irido-choroiditis, and universal lymphadenitis. After a course of anti-syphilitic treatment he also was quite cured. The author remarked that similar changes in the conjunctiva were observed in syphilitic inflammation of the tarsal cartilage.

617. *Neumann on Excision of Primary Sores and Glands in Syphilis.*—Dr. Neumann brought before the Society of Physicians of Vienna a patient from whom he had a long time ago removed the primary sore and the enlarged glands on the thirty-first day after syphilis had been contracted. A macular rash and desquamating papules appeared on the abdomen on the fifty-third day. The man, who seemed to be cured after a long course of treatment, came again to Professor Neumann in April of the present year, suffering from gummy orchitis, syphilitic ulcers and gummata of the pharynx, and soft palate and periostitis of the tibia. In the author's opinion this case proved that excision of the primary lesion and glands not only did not prevent the spread of the syphilitic affection, but did not even make the course of the disease milder. ARTHUR COOPER.

618. *Trzcinsky on the Treatment of Syphilis by Deep Subcutaneous Injections of the Yellow Oxide of Mercury.*—Dr. Trzcinsky reports ninety cases of syphilis treated by deep subcutaneous injections of the yellow oxide of mercury, recommended by Watraszewski in the following formula:—

℞ Hydrarg. oxyd. flavi 1·00 (sixteen grains).
Gummi accaciæ 0·25 (four grains).
Aq. destill. 30·00 (one ounce).

S. To be kept in a dark place in order to prevent decomposition by the light. The full contents of a Pravaz syringe were injected every fifth or sixth day alternately into the right or left gluteal region. The needle, three centimètres (one inch and one eighth) in length, was so deeply inserted in perpendicular direction as to convey the fluid between the aponeurosis and the subcutaneous fat. The most convenient place for the injection is three to four centimètres (one inch and one eighth to one inch and a half) behind the height of the trochanter. The fluid, before the injection, is agitated in order to distribute the powder equally, and retained after the injection by placing one finger on the puncture. All the patients selected for this treatment were women, who are, as well known, more sensitive to this kind of injection, and therefore presented a more suitable test-object. Of the total number of 498 injections only one was followed by a small abscess, and in this instance only in consequence of a technical oversight. Consecutive pains, which did

not occur in every case, were but of the smallest degree, and were well tolerated by the patient. Almost in every case slight tumefaction in the gluteal region appeared on the second or third day, but in every instance, except in the aforementioned case, passed away within a few days. Only in three cases, after the first injection, the following had to be deferred for a short period, in consequence of painful infiltration. Salivation, with inflammation of the gums, took place in one patient only, in whom, after the third injection, symptoms of acute mercurial poisoning (gingivitis, salivation, tremors of the tongue) set in; in three only of the ninety cases the injection had to be discontinued, on account of the condition of the oral cavity, in patients whose teeth were all decayed.

As regards the comparative value of injections of the yellow oxide of mercury, it proved most effective in the pustular and ecthymatous forms of syphilides with tendency to ulceration, in which four or five injections were sufficient to remove all the symptoms of the disorder. This was effected in one patient even by only two injections. Only three relapses occurred after four, five, and seven weeks.

The author considers, from this experience, subcutaneous injections of the yellow oxide of mercury preferable to those of calomel, as they do not produce abscess, nor severe pain, which the latter, although so efficient, are apt to cause. But neither the yellow oxide nor calomel will replace or diminish the value of the grey mercurial ointment in syphilis. FERD. ADALB. JUNKER, M.D.

619. *Aranjo on Salicylate of Mercury in Syphilis.* Dr. Aranjo gives half a grain of the salicylate of mercury three times daily in the treatment of syphilis, and it has also been administered in the form of hypodermic injections. It is well supported by the stomach, and never gives rise to mercurial stomatitis. It acts more promptly and more energetically on the manifestations of syphilis than any other preparation of mercury. Applied externally to syphilitic ulcerations it induces rapid cicatrisation. As an urethral injection in gonorrhœa it yielded very excellent results, and a solution containing one grain of the salt in two fluid ounces of water, with enough carbonate of potash to dissolve it, has been extensively used as a collyrium in syphilitic affections of the eye.

620. *Mauriac on the Treatment of Gonorrhœa.*—The abortive treatment of acute gonorrhœa can only be attended with success if undertaken within the first few hours after its commencement. All attempts to cut short an attack during the inflammatory stage are useless and dangerous. The antiseptic treatment, based on the microbian theory, has, so far, proved altogether illusory. It is indispensable to submit the patient to antiphlogistic treatment until the inflammatory symptoms are past, when repressive treatment may be resorted to, good results being only possible in the period of decline. The duration of the repressive treatment should be short, and, unless benefit be at once obtained, it should be abandoned in favour of a return to the antiphlogistic treatment. Imperfectly cured gonorrhœa can only be subdued by beginning with the antiphlogistic treatment. ALFRED S. GUBB.

621. *Stirling on Some Rare Complications of Gonorrhœa.*—In the *Australasian Med. Gazette*, February 1888, p. 115, Mr. Stirling, M.B., records some cases of gonorrhœa in which complications of a rare form arose. A young man with urethritis of four weeks' standing sought advice on account of an undoubted Hunterian chancre of the glans; he had been taking copaiba capsules for the discharge. Five days later he felt pain in the perinæum, and a small swelling was detected on the left side of the raphé; this increased during the next two or three days, when Mr. Stirling pushed a tenotome into the tumour; no pus was obtained, but a good deal of blood escaped. On examining with a probe a considerable cavity was found to exist, running up laterally to the ischial tuberosity, and forward along the course of the urethra. The cavity was injected with a solution of carbolic acid (1 in 20), a drainage tube inserted, and the wound dressed with iodoform. In two days the wound had closed, and at the end of a week the swelling almost disappeared. The danger in these cases is the formation of an abscess which might open into the urethra; hence the necessity of making an early incision. Another rare complication is orchitis, which is nearly always associated with the abuse of copaiba or sandal oil in lymphatic subjects. There are two symptoms besides the local signs which are almost diagnostic—the agonising pain and the obstinate constipation. The best plan of treatment is to apply a dozen or more leeches to the inflamed gland. Superficial abscesses about the rectum occur very frequently in patients who are just recovering from a gonorrhœa. When detected they must be opened at once, and it is generally necessary to give an anæsthetic, on account of the severe pain and probable depth of their burrowing; they are best dressed with iodoform. A case is also recorded of a gentleman, aged 49, who had gonorrhœa several years ago, but suffers from abnormal erections, due to the formation of two small hardened nodes in the corpora cavernosa; at times they become very painful, and render him practically impotent. This patient thinks they are directly connected with the attack of urethritis; but Van Buren and Keyes, who describe a similar condition, believe this affection has no venereal origin, but such cases are so rare that it would be interesting if everyone would report their experiences of their cause and treatment. RICHARD NEALE, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

622. KNAPP, H.—A Hundred Successive Extractions without Iridectomy. (*Archives of Ophthalmology*, March 1887 and January 1888.)

623. BURNETT, DR. SWAN.—On Extraction of Cataract without an Iridectomy. (*Med. News.*)

624. TWEEDY.—On Extraction of Immature Cataract. (*Lancet*, May 1888, p. 966.)

625. GRANDCLÉMENT, DR.—On the Effects of, and Indications for, the Use of Antipyrin in Ocular Disease. (*Lyon Médical*, May 20, 1888.)

ART. 622. *Knapp on a Hundred Successive Extractions without Iridectomy.*—These two papers, between the publication of which nearly a year elapsed, mark the gradual conversion of the author to the abandonment of the iridectomy in extraction. His first paper closes with the remark that 'simple extraction is practicable in the majority of cases with the same degree of safety as the extraction combined with iridectomy. In a considerable minority of cases, however, the latter is preferable; in a number of cases the indications for the iridec-

tomy manifested themselves before, and in others during the operation.' The indications for the iridectomy are considered to be escape of vitreous prior to the delivery of the lens; rigidity of the sphincter, especially if the iris has fallen over the knife and been wounded, and the occurrence of an irreducible prolapse. In the second paper the writer, after further experience, speaks very highly of the results obtained, and we hear little of the cases in which iridectomy is required. It is probable that these papers will do much to strengthen the position of this operation. The ultimate results reported as obtained are decidedly good; out of 100 cases 50 had vision of not less than 20-40ths; 14 had 20-50ths to 20-70ths; 12 had 20-100ths to 20-200ths; 3 had 15-200ths to 10-200ths. One total failure. The weak point in the proceeding is the number of secondary operations. The writer attributes this to his requiring a higher visual acuity than some other operators. We should, however, be inclined to doubt this explanation, and think that it is due to the greater freedom with which the capsule can be lacerated when an iridectomy has been performed. The author's method of dealing with capsular opacities differs from that in general use; he makes an incision with a Beer's knife through the cornea and the membrane, and then draws out a portion of the latter with a Tyrell's hook, and cuts it off, together with a small piece of adjacent iris: this operation is reserved for the denser opacities, the majority being treated by discission. It is stated that no reaction follows, but we cannot but think that the proceeding is one of danger, as it violates the well-known rule of avoiding all traction on the ciliary attachment of the membrane. In performing discission only one needle was used, and in a few cases the result of this was seen by the appearance of circumcorneal injection, chemosis, and turbidity of the vitreous, and in one case acute glaucoma came on. It was to avoid these complications that Sir W. Bowman many years ago advocated the use of two needles, so that all dragging on the membrane might be avoided. In performing the operation Knapp seats his patient in a chair, he uses Gräfe's knife, and makes a flap involving two-fifths of the corneal margin with a conjunctival flap. The capsule is opened in the centre with a cystotome, a horizontal incision being added at the upper part; but in a large number of cases the central part of the capsule is seized with forceps and removed. Pressure is made on the lower part of the lens towards the centre of the globe through the cornea. Residual cortex is removed by friction with the lower lid. During the operation the eye is irrigated with Panas solution, and some is injected into the anterior chamber with the view of rendering the wound aseptic and not for the removal of cortex. The author makes in his second paper some very sensible remarks as to the part played respectively in the production of septic inflammation by micro-organisms and other causes, and lays down some very good general rules for operating and for the after-treatment. As regards the desirability of omitting the iridectomy there can be no doubt that this paper will make some converts to simple extraction. The unfavourable points are the frequency with which some prolapse of the iris occurred (12 per cent.), and the large number of secondary operations that were necessary. Assuming that the iridectomy is to be omitted, it becomes a question whether a peripheral incision is the best. Knapp is of opinion that this position of the wound does not favour prolapse—a proposition which seems improbable—but it is a question worth considering whether an incision lying partly in the cornea would not allow an easier exit of the lens and be more readily co-apted in a flaccid cornea.

623. *Burnett on Extraction of Cataract without an Iridectomy.*—In a clinical lecture delivered at the Garfield Hospital, U.S.A., Dr. Swan Burnett advocates extraction without iridectomy. His opinion is that 'in the good cases the results are better, and in the bad cases they are no worse than when an iridectomy is performed.' Like Knapp the author makes the incision entirely in the limbus when possible. If prolapse of the iris takes place an attempt at reduction is made with a probe, aided, if necessary, with eserine. If these means fail iridectomy is resorted to. Both Knapp and Burnett use a protective bandage. W. ADAMS FROST.

624. *Tweedy on Extraction of Immature Cataract.*—In the *Lancet*, May 1888, p. 966, Mr. John Tweedy advocates the practice of operating on immature cataracts in suitable cases, and states that unripe cataracts may be removed as easily and successfully as ripe ones. During the last seven years at Moorfields the author has extracted twenty-nine immature cataracts. One eye was lost from late serious iritis and glaucoma, and was eventually excised. Two cases had severe iritis, and in one a small amount of vitreous was lost; but these three and all the other cases ultimately got good vision, except two which were found, after the operation, to have old vitreous opacities. Needling was required in thirteen of the twenty-nine cases. The method of operating is thus described. A corneal section upwards with a Gräfe's knife, with an iridectomy, and a peripheral section of the capsule of the lens with a cataract knife, leaving the anterior capsule, as far as practicable, intact. By this means the lens is taken as it were out of a pocket, any lens matter that may be left behind, or that may subsequently be formed, remaining inside the capsule, which is accustomed to its presence, and where it does not set up irritation. If, after a reasonable delay, opaque matter should obstruct the pupillary area, the capsule may be easily torn through by a single needle. The article published by Mr. Higgins in the *Lancet*, p. 915, in which he says that the transparent cortex becomes opaque after extraction by the ordinary methods in these cases of immature cataract, does not coincide with Mr. Tweedy's experience. RICHARD NEALE, M.D.

625. *Grandclément on the Effects of, and Indications for, the Use of Antipyrin in Ocular Disease.*—Generally speaking, subcutaneous injections of antipyrin produced more rapid and more satisfactory effects than when given by the mouth. Ocular and especially peri-ocular pain, were promptly and almost without exception relieved by such injections, which often markedly attenuated the condition of spasm. Most of the inflammatory changes of the globe of the eye were influenced favourably, especially those accompanied by pain in the ciliary region. As a general rule, the severer the pain the more marked is the effect produced. The injections seldom failed to give rapid relief in cases of keratitis, iritis, and glaucomatous irido-choroiditis, as well as in hemicrania of ocular origin, twitching of the eyelids, and monocular hemeralopia. It appeared to exercise a slower but favourable action in cases of episcleritis, sclero-choroiditis, and opacities in the vitreous humour—all obstinate affections, resisting

all known methods of treatment. He made altogether upwards of 300 injections in the temporal region, containing 4 grains of antipyrin and $\frac{1}{12}$ grain of cocaine dissolved in 10 drops of aseptic distilled water. No abscess ever formed—at the most a slight induration, lasting from eight to ten days, remaining.

ALFRED S. GUBB.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

626. BRIEGER, PROFESSOR L.—On the Presence of Tetanin in a Tetanic Patient. (*Berliner klin. Wochensch.*, April 23, 1888.)

627. OPPENHEIM.—A Case of Progressive Bulbar Paralysis without Anatomical Alterations. (*Ibid.*, April 16, 1888.)

628. CANTANI (Naples).—On the Extension of the Virus of Rabies along the Nerves. (*Ibid.*, April 30, 1888.)

629. BINSWANGER (Jena).—On the Pathology of the Epileptic Attack. (*Ibid.*, April 30, 1888.)

630. SIEMERLING.—A Case of Cerebral Localisation. (*Ibid.*, April 16, 1888.)

631. JOSEPH.—The Physiology of the Spinal Ganglia. (*Ibid.*, April 16, 1888.)

632. GUTTMANN, P.—On a Reflex Respiratory Action of the Corneal Branches of the Fifth Nerve. (*Ibid.*, April 23, 1888.)

633. MENDEL.—On Hemiatrophia Facialis. (*Deutsche med. Wochensch.*, April 19, 1888.)

634. REMAK.—A Case of Bilateral Trochlear Paralysis. (*Berliner klin. Wochensch.*, April 30, 1888.)

635. FÉRÉ, DR.—On the Treatment of Epilepsy by Means of the Actual Cautery to the Scalp. (*Rev. de Thérap.*, May 15, 1888.)

636. LUCKIE, DR. BUCKNER.—Fracture of the Cervical Vertebræ. (*Virg. Med. Monthly.*)

ART. 626. *Brieger on the Presence of Tetanin in a Tetanic Patient.*—Professor Dr. L. Brieger has an article on this subject in the *Berliner klin. Wochensch.*, April 23, 1888. [For an account of recent researches into the etiology of traumatic tetanus see the LONDON MEDICAL RECORDER, March 20, 1888.] Brieger has made a most important advance in our knowledge of this subject by his discovery of one of the toxines produced by the tetanus bacillus in the amputated arm of a patient affected with acute traumatic tetanus. A man, aged 30, sustained a very severe accident to his arm, which was caught in a machine, all the skin being detached from above the elbow to the middle of the hand, and left hanging reversed. As the deeper tissues were uninjured, an attempt was made to save the limb; and the skin was replaced, incisions into it being required for this purpose. The man became feverish, and large portions of the skin sloughed away after a few days, upon which the fever declined and the patient improved a little. On the tenth day he awoke with rigidity of the lower jaw; by midday the rigidity affected the muscles of the neck and trunk, and next morning spontaneous convulsions set in. At midday on the second day of the tetanus amputation at the shoulder was performed, but convulsions and opisthotonos soon supervened, and the patient died in a few hours. The autopsy revealed nothing abnormal in the central organs. The arm was chemically treated by Professor Brieger within about an hour after its removal. The muscles and skin were stripped off, cut into small pieces, acidulated with dilute hydrochloric acid, and boiled in alcohol. Albumen and inorganic salts were separated as completely as possible from the evaporation residue by repeatedly taking up with absolute alcohol, and the residue was then precipitated by platinum chloride. A considerable quantity of ammonia was thus separated, and there resulted an easily soluble platinum double salt, crystallising in tables. This salt, after repeated purifications, was decomposed at 197° C., and contained 29·98 per cent. of Pt., whilst tetanin-platinum-chloride requires 28·65 per cent. The physiological properties and chemical reactions of the hydrochloride freed from platinum chloride established the fact of the presence of tetanin already shown analytically. The presence of tetanin during life in a patient affected with traumatic tetanus is thus established. Some inoculations were made with the flesh (which microscopically showed tetanus bacilli, besides bacilli of different length, staphylococci and streptococci) beneath the skin in mice, guinea-pigs, and rabbits. Tetanus resulted without exception, but a dog proved refractory to this procedure, and was unaffected even by an injection of tetanin. A large quantity of an infusion of the flesh, which proved fatal to rabbits, was injected into a horse, but the only result was a large abscess. The pulpy tissue sown upon meat broth, fish broth, and blood-serum produced, besides a good deal of ammonia, only tetanin. No tetanoxin was produced, nor spasmotoxin, nor the unknown toxine obtained from Rosenbach's original cultures. A large quantity of tetanin was injected into a horse, and violent muscular contractions followed and persisted for a long time, but the characteristic rigidity of tetanus in the horse was absent. It is worth mention that from the brain, spinal cord, and larger nerves of the bodies of two persons dead of tetanus, neither pathogenic micro-organisms nor toxines were obtained. Professor Brieger concludes his paper as follows:—'After what has been said above, it may be hoped that a more intimate union of exact chemistry with clinical medicine will explain the mechanism of other diseases, besides the infectious, and that a specific therapeutic treatment will be indicated. The immunity-experiments by means of the "tissue-change products" of certain pathogenic bacteria recently so successfully carried out by Pasteur and his disciples lend great support to this.'

627. *Oppenheim on a Case of Chronic Progressive Bulbar Paralysis without Morbid Alterations.*—A young woman, aged 29, became ill with weakness of the limbs, bulbar speech defects and difficulty in masticating and swallowing; the paralytic symptoms gradually increased, without atrophy of the muscles. The intellect remained normal, also the general sensibility, and the functions of the bladder and rectum. At the end of two years the patient died of pneumonia, due to the ingestion of food (*Schluckpneumonie*). The most careful examination of the nervous system revealed nothing abnormal. The pons and medulla oblongata, the spinal cord, the cerebral nerves, and portions of muscles with nervous twigs were included in the examination. Peculiar appearances which were found in the facial nerve root could not be regarded as pathological after comparison with other portions. The disease was therefore a neurosis, with bulbar symptoms predominant. The case had nothing in common with

pseudo-bulbar paralysis, neither as to the symptoms nor pathological appearances, and the patient had no cardiac or vascular disease. The cerebral arteries were found healthy; the brain itself, therefore, was not microscopically examined. In the discussion which followed the report of this case Herr Thomsen had found peculiar appearances in various cerebral nerves, especially the facial, near the medulla, and such appearances were not to be looked upon as pathological.

628. *Cantani on the Dissemination of the Virus of Rabies along the Nerves.*—At the recent Congress, Wiesbaden, April 9–12, Dr. Cantani (Naples) brought forward the results of experiments and observations on the way in which the virus of rabies is centrally conducted along the nerves. Inoculations beneath the dura mater do not correspond to the natural mode of infection. Rabies is caused also when the virus is injected into the nerves in animals. If they are killed before the outbreak of the disease, it is found that when the injection has been made into the lower limbs the lower half of the spinal cord is infected, if into the upper limbs, the upper half. If the injection is made into one sciatic nerve, the other becomes centrifugally infected. When sections of the spinal cord are made before the inoculation, the separated part of the spinal cord remains free from the disease. Rabies accordingly extends itself along the nerves, perhaps also by the blood. One patient, who had been bitten in the legs, had paralytic rabies; another, who had been bitten in the hands, rabid rabies. In order to copy the natural mode of infection, rabbits should be inoculated in the nerves; preventively inoculated rabbits do not then die, whereas such rabbits succumb to subdural infection.

629. *Binswanger on the Pathology of the Epileptic Attack.*—At the same Congress, Herr Binswanger, of Jena, read a paper on the pathology of the epileptic seizure, referring especially to those forms which originate in the medulla oblongata. Kussmaul, also Nothnagel, had worked out these forms. Those seizures which start from the cortex afterwards occupied more attention. According to Nothnagel it is certain that seizures may originate in the medulla. When electrical or mechanical irritation is employed in a modified manner, reflex convulsions are set up from below upwards till they become general. Section experiments show that the anterior part of the pons cannot be the central source of the convulsions, which must be credited to the ascending (sensory) root of the fifth nerve. Similar experiments show that the condition of cortical irritation can only be effected through the tegmen. The so-called convulsive centres are really reflex centres. The tonic stage of the epileptic seizure is apparently effected by the medulla, the clonic by the cortex. In the subsequent discussion Professor Nothnagel explained his position on the subject, and said it was a fact that attacks might start in the cortex. Herr Marckwald (Kreuznach) confirmed Binswanger's observations. Herr Unverricht (Jena) denied the necessity of the assumption that there was only a cortical epilepsy. A medullary convulsion-centre must also be recognised as being capable of independent excitation. Moreover, since various animals behaved so differently to experiments, any deductions from these at present were misleading.

630. *Siemerling on Cerebral Localisation.*—A woman, aged 64, previously healthy, had an apoplectic attack, followed by paralysis of the right arm and leg, the arm being the most affected; an aphasic disturbance of mixed character ensued. The paralysis and aphasia persisted several months with slight remissions. Towards the end there appeared a right-sided facial paralysis. There were repeated epileptiform attacks with disturbance of consciousness, and characterised by clonic contractions on the paralysed side of the body. In the face the contractions were mainly on the right side, but affected the left also. The patient died in an epileptiform seizure, and the autopsy showed the condition of things to be as follows:—The heart was atrophic, the kidneys appeared normal. The macroscopic examination of the brain showed, besides atheroma of the vessels at the base, and a small ancient patch of softening at the head of the left corpus striatum, yellow softening in the left occipital lobe, replacing both cortex and grey matter as far as the posterior horn of the lateral ventricle. Microscopical examination of the hardened brain showed patches of nuclear cells of various sizes in the cortex and grey matter of the left hemisphere. Centres of this kind of degeneration were found in the temporal lobes, in the anterior central convolution, and in the third frontal convolution. Though this does not permit a precise localisation of the disturbances induced by these changes, the clinical symptoms are explained by them. In answer to Professor Remak, Dr. Siemerling said that the posterior part of the internal capsule and the optic thalamus showed no morbid alterations. Westphal observed that probably many inconsistencies of the localisation theory are owing to the want of microscopical examination.

631. *Joseph on the Physiology of the Spinal Ganglia.*—This paper was read at a meeting of the Berliner Gesellschaft für Psychiatrie und Nervenkrankheiten. The author's method of investigation was to divide the second cervical nerve in cats, in some cases between the spinal cord and the spinal ganglion, in others peripherally to the latter. After six or eight weeks the animal was killed and the nerve examined. The results were as follows:—After section of the motor part only the peripheral part degenerated, the central remained normal. Division of the nerve beyond the ganglion caused complete degeneration peripherally, whilst only partial degeneration ensued in the spinal ganglion and the posterior root. Similar degeneration was found in the peripheral nerve and the ganglion after division of the posterior root. Moreover, in this case the central portion attached to the spinal cord showed advanced degeneration. The author concludes as follows from his experiments:—1. A trophic centre for the motor fibres exists in the spinal cord. 2. A bundle of direct nerve-fibres, which pass through the appropriate spinal ganglion (without being connected with its cells) towards the periphery, has also its trophic centre in the spinal cord. This explains the partial degeneration in the ganglion and beyond it after central, and in the posterior root and ganglion after peripheral, division of the nerve. 3. There exist independent trophic centres in the spinal ganglia for the sensory nerves, but the assumption that these ganglia contain centres for the peripheral organs is without support. Each ganglion-cell is connected with both the centre and the periphery.

632. *Guttmann on a Reflex Respiratory Action of the Corneal Twigs of the Trigeminus.*—At the meeting of the Berlin Medical Society on March 21,

Dr. Guttmann read a paper on the above subject. A case of atropine poisoning occurred, a boy, aged 4 years, having taken ten or twelve milligrammes of atropine. The boy was quite unconscious for five or six hours, and during that period the following phenomenon was observed. Every time that the cornea was touched with the point of the finger, an immediate arrest of respiration occurred in the expiratory thoracic position, the arrest lasting from five to nine seconds. The respiration when left to itself was rhythmical, and somewhat more frequent than normal. The experiment was made about twenty times during the unconsciousness of the boy, and it is worthy of remark that on each occasion the reflex closure of the lid was observed to be retarded. It may be inferred from this the respiratory centre is more easily excited than the central origin of the facial nerve. All signs of poisoning disappeared after nine hours. Dr. Guttmann states that the above observation had not been made hitherto, and infers that the phenomenon was due to irritation of the corneal twigs of the fifth nerve. This reflex arrest of respiration is an influence known to be possessed by the second and third divisions of the fifth, and by one branch of the first division (the supraorbital supplying the eyelids). In the discussion which took place Herr Schweigger remarked that sneezing was not an infrequent consequence of forcibly opening the eyelids in children with keratitis and photophobia; probably this occurred through the optic nerve, but how hyperæsthesia of the retina was caused by irritation of sensory nerves (trigeminal) was not easy to explain. The same irritation influenced also the movements of the eye, causing a spasmodic upward rolling. Herr Hirschberg had often seen a temporary arrest of respiration ensue upon the application of cuprum sulphate in cases of ophthalmia neonatorum at the time when that substance was the favourite remedy. Herr Sandman had made numerous experiments some time ago on the reflex relations of the trigeminus to respiration. Arrest of the respiration during active expiration occurred chiefly after painful irritation of any part of the body; also when the cornea is lightly touched. Sneezing as an effect of the action of light upon the eye was in all probability due, not to the optic nerve, but to the corneal ciliary twigs derived from the naso-ciliary nerve. Dr. Guttmann, in reply, said that sneezing as the effect of a sudden light was well known, but the subject of his paper was, he believed new.

633. *Mendel on Hemiatrophia Facialis.*—Herr Mendel showed a case of the above at a meeting of the Berlin Medical Society, April 19, and read a paper on the subject. The patient, a woman, was brought before the Society by Professor Virchow in 1880. At the age of twenty-five, during her first and only puerperium, she had facial erysipelas, followed by persistent severe pains in the left side of the face and head. Pains in the left arm and shoulder succeeded, and when Virchow showed her to the Society there was already hemiatrophy of the face, chiefly in the region supplied by the second and third branches of the fifth nerve. She ultimately died of phthisis while under Dr. Mendel's care, and the latter made the *post-mortem* examination. The left half of the tongue, the muscles supplied by the facial and the motor part of the fifth nerves were atrophied, in the left radial region the skin was thinner than usual (like that on the left half of the face), and the muscles were atrophied. Macroscopically the nerves showed nothing abnormal, but microscopically some interesting alterations were found—the corresponding structures on the other side were in every case examined also. The second branch of the fifth nerve (left) was most affected; the neurilemma was three or four times as thick as on the other side, and connective tissue fibres passed from it transversely through the nerve fibres. Transverse sections adjacent showed partly normal, partly disappearance of nerve fibres. This 'proliferating interstitial neuritis' was first described by Virchow. The process could be followed from the place of cerebral exit. The intensity of the alteration in different sites corresponded to the clinical phenomena during life. The left radial nerve showed a similar condition, but the third and other cerebral nerves were perfectly normal. In the brain only the descending root of the fifth was atrophic, but the left substantia ferruginea showed signs of atrophy. The spinal cord showed partial atrophy of the ganglion cells of the left anterior horn, but only at the level of the fourth and fifth cervical nerves. The atrophied skin was examined by Professor Köbner. The cutis alone was affected; the thickness on the right side was 0·95 millimètre, on the diseased side 0·3 millimètre. The affected muscles showed simple atrophy. Anatomical foundation was wanting prior to this case; previous examinations (two) had given a negative result. The author concludes that hemiatrophia facialis is due to an interstitial neuritis, similar to the neuritis after fractures and acute diseases, and explains why the trophic fibres are alone affected by analogy with various poisons and injuries, which sometimes affect exclusively the sensory fibres, sometimes the motor. Only the descending root of the fifth was affected, hence this contains the trophic fibres of the nerve. The trophic cells are therefore in part in the substantia ferruginea of the corresponding side. This neuritis was an ascending neuritis. The radial nerve was unaltered, and so were those parts of the anterior horn of the spinal cord from which we know that the radial arises, but the anterior and posterior roots were unaltered. The alterations in the anterior horn represented atrophy after about twenty-five years' loss of function of the radial nerve.

634. *Remak on Bilateral Trochlear Paralysis.*—A man, aged 26, non-syphilitic and non-tuberculous, suffered for some years from giddiness on looking upwards strongly; since one year he also suffered thus on level ground. He complained, too, of occipital pains, a somewhat drunken gait, slight difficulty in swallowing, weakness of the legs, and difficult micturition. Examination revealed slight static giddiness, dysphagia, considerably increased knee jerk, and indication of ankle clonus. In the ocular examination Uhthoff assisted, and there were found right-sided trochlear paralysis, nystagmus-like contractions in the lateral positions on both sides, normal pupillary reaction and normal retinal appearance. Whilst the patient was under observation in hospital, the right-sided trochlear paralysis gradually became bilateral, according to the behaviour of double images. From the relations of the trochlear nucleus and nerve-fibres, there was evidently a fascicular lesion of the latter in the so-called trochlear decussation in the *velum medullare anterius*. In the discussion Mendel thought the symptoms pointed rather to cerebellar disease. According to Uhthoff, other eye muscles were also affected; there was paralysis of the abducens on

both sides. Remak remarked that bilateral trochlear paralysis had never been mentioned in the numerous cases of cerebellar disease to be found in literature; moreover, in this case the usual pressure symptoms were absent. The author said that an observation of Nieden pointed to a tumour of the pineal gland, but that observation had not been confirmed by others.

E. J. EDWARDES, M.D.

635. *Féré on the Treatment of Epilepsy by Means of the Actual Cautery to the Scalp.*—The experiments were carried out on ten adult patients suffering from some degree of hemiplegia, due to a cerebral affection which had preceded the convulsive symptoms. These may be grouped under two heads—(1) those in whom the convulsions commenced in one of the paralysed limbs and which corresponded to the so-called 'Jacksonian epilepsy'; (2) cases of ordinary epilepsy without any marked localisation of the convulsive movements and without local aura. The method of revulsion employed in all the cases consisted in the application of ten or fifteen light touches with the actual cautery, never severe enough to give rise to suppuration and repeated every two or three days, applied to the region of the scalp corresponding to the psychomotory area. In eight out of the cases a more or less marked diminution in the number of attacks was obtained. ALFRED S. GUBB.

636. *Luckie on Fracture of the Cervical Vertebræ.* Dr. Buckner Luckie reports two cases in which patients recovered from fracture of the cervical vertebræ. In the first the fourth cervical vertebra had been broken off near the body of the bone. In raising the patient up his head would fall forward, allowing the chin to rest on the chest. There was a partial general paralysis, extreme nausea, and inability to void the urine. In the second there was a fracture of the sixth cervical vertebra with a laceration of the ligaments, and concussion of the other cervical vertebra; also contusions over the lumbar region and sacrum, with concussion, all this resulting in a general paralysis except as to the rotating of the head. For thirty-six hours the head continued to turn from side to side without intermission; at the end of this time the head gradually ceased to turn, and the man began to regain consciousness, and could articulate. The man was completely blind, in which condition he remained for fourteen days, when his vision slowly began to return.

REVIEWS.

ARTICLE 637.

Dissolution and Evolution and the Science of Medicine. By C. PITFIELD MITCHELL. London: Longmans. 1888.

THIS remarkable book is worth careful study. It is an application of the principles of organic life which the master mind of English philosophy, Herbert Spencer, has formulated in his *First Principles*, and argued with the power he possesses above, perhaps, all modern writers as the principles of Biology. Mr. Mitchell here applies these principles to the study of disease, and endeavours to reduce the complicated processes included in pathology to simpler principles. Those who are acquainted with Herbert Spencer's writings know that a depth of thought is veiled in language peculiar to him, and difficult for the grasp of an ordinary intellect, and they will not be surprised to find that his disciple sometimes out-Herods Herod, and until the reader becomes accustomed to the style he is apt to give up in despair any further examination of the work. But this would be unfair to the author, for there is a mine of thoughtful argument in it, and the suggestive application of the principles discussed to the practical work of treatment is worthy of very careful consideration. On the very first page of the preface we find, 'A multitude of facts will be seen to acquire a remarkable concinnity, unity, and order.' Part III. of the work is headed 'Implications,' and this includes 'The results and contingent principles,' under which heading we find 'Summary, heredity and disease, organic equilibration, and practical deductions'; sentences such as 'Particular phenomena previously cognised as more or less separate and individual were affiliated with one another by natural cause and effect'; 'What of instant utility may we learn from this research?' 'Hitherto all reasoning upon the heritableness of disease'; 'Since the varieties of energy are conceivably modes of motion, it appears allowable to give co-extension and connature to kinetic energy and motion'; 'The attempt to co-ordinate the facts will necessitate a divagation.' Sentences such as these abound in the work, and will scare many readers; but, as we have already remarked, this would be a pity, and if one reads the preface and introductory part again, after carefully going through the work, words and sentences which were, perhaps, hardly understandable are seen to contain an amount of force and thought-bearing value which is remarkable.

'The sustaining elements of the Synthetic Philosophy are the doctrines of evolution and dissolution.' The design of this work is 'to inquire whether these may not be made fertilising principles for large collections of the data of pathology, and thus the means of practice for the physician and surgeon.'

Of these two principles which run through the workings of organic life dissolution plays by far the more important part in disease, but the two work so much together that few morbid processes do not include them both. We have recognised them under other names hitherto, and it is no new discovery that destruction and repair go hand-in-hand. But in this philosophy some of the processes we have looked upon as evolutional are here regarded as dissolutional; as, for instance, tissue-histogenesis; and this appears contradictory when the growth of connective tissue in chronic affections is allowed to be evolutional. The argument is used that in fibrosis, sclerosis, &c. the interstitial growth is secondary and consequential, whereas the parenchymatous elements are primarily affected by dissolution. Injury or death of the parenchyma favours development of the interstitial substance by diminishing resistance to its growth.

Roughly speaking, dissolution and evolution represent the downs and ups of organic life, and 'equilibration' the happy mean; but the latter term is far more comprehensive than this, and includes the processes which bring about this condition, and this we have generally known in medicine as the 'vis medicatrix naturæ.' Mr. Mitchell rightly urges that this grand principle, which Herbert Spencer has named more in accordance with its method of working, should be better understood and utilised in the treatment of disease; but 'whether restoration to

health is compassed by natural equilibration or by art, knowledge of the processes involved should in either case be received into the institutes of medicine.'

To understand at all clearly his reasoning and its application one must bear in mind constantly the meaning which Spencer attaches to the terms ; and we sit humbly at the feet of the great philosopher and learn that 'dissolution is a disintegration of matter and concomitant absorption of motion.' Motion being the term used for force of any kind, for all kinetic energy is conceivably a mode of motion. 'Evolution is an integration of matter and concomitant dissipation of motion.' Organic equilibration we have already referred to as including the processes by which functional equilibrium is restored and maintained. Starting, then, with these formulæ, he examines first how far the processes of inflammation appear to bear them out, and in this he has no difficulty in showing that dissolution plays the greatest part. Resolution and repair correspond with evolution, but that the two processes are inseparable he fully recognises. The most general phenomena of 'regressive metamorphosis' and diseases produced by animal and vegetable parasites correspond with the formula of dissolution.

Accepting Ziegler's definition of disease as 'a deviation of some of the vital manifestations from the normal, the deviation being conditioned by external influences,' he examines the facts of general diseases viewed from the standpoint of his thesis. The vegetable parasites, which play so large a part presumably in the production of many diseases, induce changes of function and structure in the cells and fluids of the body which agree with the formula of dissolution—'protoplasm is split up into peptones, peptones into leucin and tyrosin, and these into simpler substances,' and allied processes occur as the result of animal as well as vegetable parasites.

Neoplasms are next passed under review, and infective tumours or granulomata (syphilitic, tubercular, glanders, leprosy, &c.) are considered to occupy an intermediate position between inflammatory new formations and the true tumours, and to show alternations of dissolution and evolution. Cystomata and teratomata the author traces carefully to their probable source, and suggests some views as to their origin, which do not fully coincide with some recent hypotheses, but they are based upon the views of Herbert Spencer in his *Principles of Biology* as to growth and true genesis. They are, he thinks, the asexual production (agamogenesis) of the individual cells of the organism, and tumours of the epithelial type are, when embryonic, of evidently similar structure, and, when more pronounced in character, are essentially due to the processes of dissolution and evolution. There is in all neoplasms a tendency to reversion to the simpler cell growth of the embryonic elements of the tissues rather than a budding out of retained embryonic cells as Cohnheim has suggested. There are some suggestive remarks on the relation of imperfect nutrition to reproduction, and a connection is shown between the localities of imperfect blood supply and the seats of tumour formation. But, as it is more correctly relative innutrition, we also find that high nutrition and excess of food may play an important part in the genesis of tumours. It would be difficult to do justice in a short notice to the arguments he adduces and the illustrations he gives, but we may call attention here to what appears to be an error in this carefully considered subject. On page 96 the author appears to represent the Pacchionian bodies as relics of functional structure. But are they not simply pathological products? A primary tumour is in his view 'both a local and systemic disease, but the local conditions largely predominate as determining factors.'

In the second division of the work he examines carefully the pathology of special and organic diseases, and considers that they bear out his interpretation of the general processes of disease, and here strongly supports his views as to connective-tissue growth being evolutional in chronic disease, while cell growth in inflammation is a process of dissolution. These two processes comprehend the changes essential to disease and their non-essential concomitants. Heredity, he considers, is a feeble or non-existent factor of disease—even gout, rheumatism, and tubercle he does not look upon as hereditary diseases—but he allows that peculiarities of tissue endowment are hereditary, and therefore when the external factors of disease come in relation with the organism, offspring and parent are likely to show the same symptoms of disease. The difference between this and the generally accepted view is important practically ; for the physician, he considers, may find and remove or guard against the external factors (including contagium, diet, temperature, and the like), whereas the disease, if really hereditary, would be far more difficult to cope with. A consideration of the importance of organic equilibration, which includes the vis medicatrix naturæ, forms the final part of the work, before he asks what practical deductions can be drawn from the research.

This part is extremely well and thoughtfully given, and with an avoidance of egoism which is refreshing at the present day. The main practical result of the inquiry he has undertaken is the conclusion that diseases are not self-originated and self-maintained, and that the powers of the physician are therefore not limited by the inexorableness of disease. The first condition for dealing effectually with many common scourges and crippling ailments will be to grasp firmly the necessary circumstances of their origin and being, and a recognition of the processes of dissolution and evolution as the main methods of the working of disease will help us to understand and to guide these factors in their course. Not the external factors alone are to be studied, but the internal and external factors in relation ; and hardly of less consequence in the management of cases must be a scientific conception and utilisation of the self-restorative powers which are included in the term 'organic equilibration.' He rightly says it is anomalous and a reproach that only the scantiest allusions to the processes of organic equilibration are to be found in the text books. No place is given to the general principles. 'It is not hazardous to say that most of the empiricism of medicine is traceable to ignorance of the living body as a conservative arrangement of forces.' Disease is a struggle between the body and its conditions ; and the conditions are weakened as the organism is strengthened. It is against rules and dogmas and empiricism that a thoughtful recognition of the general principles under which diseases act will be likely to lead to scientific and rational treatment.

We cannot conclude this notice without referring to the modest tone of the author's remarks throughout the book, and at the same time it is full of

thoughtful suggestiveness which will make it a work for those who are engaged in studying the processes of disease scientifically. It certainly is a remarkable book. The subject would be capable of considerable extension, but we think the author has done wisely in limiting the extent of ground covered, which is by no means small. W. W. WAGSTAFFE.

ARTICLE 638.

The Principles of Cancer and Tumour Formation. By W. ROGER WILLIAMS, F.R.C.S. London: John Bale & Sons. 1888.

IT is a curious coincidence that two works on closely allied subjects such as this and Mr. Pitfield Mitchell's should be published at the same time. They are both of them attempts to apply some of the general principles of biology to the processes of disease. We have already shown the aim and character of Mr. Mitchell's work, and shall find that Mr. Roger Williams's runs along somewhat the same lines, though it is limited in its application to a special class of diseases. It is evident, however, that the attention of scientific workers in pathology, and thinkers who have examined their experience in the light of recently-accepted principles, are ready to apply the results of the work of Darwin and Spencer to animal and vegetable pathology; and the short notice of recent work in this direction, which may be found in another part of this paper, will show this. This seems to us an encouraging sign of the times.

The present work appears to be intended as the stepping-stone to a much larger 'Treatise on the Pathology and Treatment of Cancer and Tumour Formation.' This is only the first of six parts. The second is to be devoted to General Pathology and Treatment, and the remaining four parts to a series of monographs on the pathology and treatment of the local varieties of the disease. This may, therefore, prove an exhaustive work, and it is interesting to notice how the present officers of Mr. De Morgan's old hospital still carry on his work, and how the present generation are to the front in the modern bearings of pathology in other regions besides human.

In this book we find the subject arranged under the following heads:—1, Growth; 2, Reproduction; 3, The Evolution of Vegetable Neoplasms; 4, The Evolution of Animal Neoplasms; and 5, Etiology. The author necessarily follows the lines of previous observers, but on the subject of reproduction we find that he has arrived at the important conclusion that the processes of repair and reproduction of lost parts, and the various morphological variations, including bud, tumour, and cancer formation, are nothing but more or less abortive attempts of certain cells to reproduce new individuals; whence it follows that the laws of reproduction are also the laws of cancer and tumour formation. 'I state this most emphatically, because the doctrine has never before been clearly enunciated, although it has for some time been vaguely foreshadowed.' We should have been glad to see the new theory more clearly enunciated than we find it in these pages. Many excellent illustrations are given of processes occurring in vegetable and lower animal life, but we confess to an inability to grasp very often the principle or aim which the author is striving to impress upon us.

The evolution of vegetable neoplasms is an interesting and important matter, and formed the subject of a paper read by the author before the Pathological Society in November 1886, and in this he maintained that cell growth and proliferation was the principle underlying the different phenomena of 'reproduction sexual and asexual, the process of repair and formation of tissues, the reproduction of lost parts, and the different morphological variations, including bud, cancer, and tumour formation,' and that therefore there was no fundamental distinction between them. The parallels he finds between vegetable and animal tumours are, we think, open to argument, but it is of great use to have them drawn at all. He has produced here some excellent observations on the steps of neoplastic growth in vegetables.

In his chapter on the evolution of animal neoplasms he comes to the same conclusion as Mr. Pitfield Mitchell in thinking that the principle of reversion to the original embryonic type in the cells explains the structure much more readily than Cohnheim's hypothesis of inclusion of germinal tissue at the sites of new growths, though he seems prepared to accept the explanation for dermoid cysts, which Mr. Mitchell does not. He gives a scheme of neoplasms founded upon His's views of the distinction of only two layers of the blastoderm. The *archiblast* originates all the products usually ascribed to the epiblast and hypoblast, including the nervous and muscular systems; in short, all the structures of the body except the connective-tissue series and the blood-vessels, which develop from the *parablast* (mesoblast). His classification would therefore be:—

I. Archiblastic neoplasms:—

a. Lowly organised, including *Epithelioma* (1) squamous (2) cylindrical (3) glandular.

b. Highly organised:—

Adenoma, *cystoma* (neoplastic), *papilloma.*

II. Parablastic neoplasms.

a. Lowly organised:—*Sarcoma*, *myxoma.*

b. Highly organised:—*Fibroma*, *lipoma*, *chondroma*, *osteoma.*

'Malignancy depends upon the indefinitely sustained activity of lowly organised cells, which grow and multiply independently, without ever reaching a high grade of organisation.' He is opposed to Creighton's view that the primary neoplastic cells infect the adjacent cells by a kind of spermatic influence, thus exciting in them a morbid action similar to their own, for this theory is opposed to biological principles, and is without parallel in organic morphology. But that author's well-known observations on the physiology and pathology of the breast are acknowledged and reproduced in support of the views here put forward on the origin of neoplasms in epithelial tissues.

The difficult subject of etiology is treated in the last chapter, and it would perhaps be unreasonable to expect much beyond general statements. Heredity and adaptation form the two important and opposing principles which he first considers, and of the two the latter is perhaps the more important. He regards the neoplasms and malformations as both of them being 'attempts of the organism to adapt itself to changed abnormal or injurious conditions of life.' But this does not bring us much nearer to understanding their causation. 'We can only,' he allows, 'point out in a general way that the changes' required to bring about a given abnormality 'must be sought in the particular relation which each organism has with the environment.' Excess of food and want of proper exercise are

referred to in general terms, and some interesting observations bearing on the subject are given carefully, which go to explain the process of gall-formation and bud-formation after external injuries, and he follows these with the remark, 'Similarly, in animals, we may attribute the genesis of all neoplasms to excessive activity of certain lowly organised cells of the part determined by local excess of nutrition, the result of intrinsic and extrinsic stimuli.'

The subject is of course a very difficult one, and the inclusion of vegetable and lowly organised animal structures in their relationship to the human organism in the pathological processes they undergo seems likely to be an important domain of science in the future. This book is another attempt to utilise the materials exposed to the biologist's observation, and must be acknowledged as such. But we feel that great clearness and systematic arrangement is required to make the subject appreciated, and we confess to having much difficulty in seeing the author's aim and the conclusions he has arrived at, and in what way they differ from previously received conclusions in many of the subjects considered. It would, we think, be an advantage to the reader if the author summarised his views clearly at the end of each chapter, and thus helped those who are slow to understand. The continuation of the work will be awaited with interest.

W. W. Wagstaffe.

Article 639.

The Surgeon's Handbook. By Dr. Frederich von Esmarch. Translated from the third German edition by B. Farquhar Curtis, M.D. Pp. 366. With 647 woodcuts. London: Sampson Low & Co. 1888.

The work before us is an English translation by an American surgeon practising in New York, Dr. Farquhar Curtis, of the last (1885) German edition of Professor von Esmarch's well-known Surgical Handbook. Originally published in the year 1877 as a descriptive treatise on surgical appliances and operations for the use of military surgeons on active service in the field, in accordance with the terms of the competition laid down at the time by the Empress of Germany, whose first prize it carried off, and then bearing the title of the 'Surgeon's Handbook on the Treatment of Wounded in War,' it has since been materially extended in scope and become a valuable book of reference for all surgeons, civil as well as military, in respect to the technical parts of professional practice. The omission of the former restriction of title in the present translation, and its generalisation as 'The Surgeon's Handbook,' is therefore fully justified by the alterations and additions which have been made in the work itself.

It would not be easy to review with thoroughness, even if space allowed, a work which is descriptive and illustrative of the whole range of surgical art, from the simplest appliance and bandage to the most complicated apparatus, and, in respect to operative surgery, from a mere incision to the most refined and the most formidable operations undertaken by surgeons. We can do little more than enumerate the contents of the volume and indicate the leading features of the work.

The same general arrangement is maintained by the author in this third edition as was adopted by him in the original essay. The book is divided into two parts, the first part being devoted to 'Dressing of Wounds,' the second to 'Operative Surgery.' Throughout the work the style of the descriptive text remains as terse and compressed as it was in the first edition, in obedience to the stipulation by the Empress that 'the description of the various methods of bandaging and dressing, as well as of the surgical operations which are required on the battlefield, should be shown as shortly as possible, so that the book may become a serviceable companion and practical aid for every military surgeon.' The author in his expansion of the third has evidently not forgotten the motto which he prefixed to his first edition, *Kurz und Bündig*, curt and concise; but it is one of the special merits of Professor Esmarch's language that, although his descriptions are very brief and succinct, they are none the less clear and explicit. At the same time, while curtailing the descriptive text as much as possible, the author, knowing that there is little time or opportunity for much reading when on active service in time of war, and regarding the work as more especially designed to act as an aid to memory than as a means of primary instruction, has been most liberal, almost profuse, in the accompanying drawings and illustrations. In the preface to the first edition Professor Esmarch remarked that the main object in view could be better accomplished by means of illustrative drawings than by words, for 'a glance at a picture which plainly represents a dressing, an operation, or an anatomical dissection, will recall in the most rapid manner what has been previously learned, but has escaped the memory under the pressure of military incidents.' Professor Esmarch has followed up this idea, for the illustrations, which numbered 566 in the first edition, have been increased to 647 in the new work before us. There can be no doubt that the same reasons which were regarded as making the illustrations of special advantage to military surgeons have equal force with a large proportion of civil surgeons, to whom little time is left for much reading when once they have become subject to the multifarious calls of active practice.

An abridged list of the matters described in the book will suffice to show their practical nature. The first part commences with explanations of the objects to be kept in view by surgeons in the treatment of wounds and injuries, and supplies general rules regarding the management of the patients and their surroundings, and on the requisite conditions of all dressings and appliances concerned in their treatment. Then follow particular accounts of the materials for dressings; antiseptic applications; means employed for reducing inflammation; bandages suitable for the various parts of the body; handkerchief dressings; varieties of splints; immovable dressings; extension dressings; emergency dressings; contrivances for moving injured and helpless persons; together with descriptions of a variety of miscellaneous surgical apparatus. The articles referred to in the text of this part of the book are illustrated by 289 woodcuts.

The second part, devoted to operative surgery, is divided into a series of sections, and embraces the following subjects:—anæsthesia; secondary antisepsis; treatment of complicated injuries of bones and joints; indications for amputation; removal of foreign bodies from wounds; suture of tendons; suture of nerves; control of hæmorrhage; ligature of individual arteries; venesection; transfusion;

amputations and disarticulations; resections of joints; trephining; tracheotomy; operations upon the walls of the chest; intestinal suture; urethrotomy and cystotomy; hypodermic injections; and operations by artificial light. Over 350 woodcuts are inserted in illustration of the contents of this part of the volume.

There are many useful manuals on wound-dressing and bandaging, as well as on the practice of operative surgery, but we are not aware of any so complete, or that so directly conveys the information which a surgeon may require in an emergency, as the handbook under notice. The illustrations with which the volume abounds are so plain and expressive that they at once supply information on the essential points of any appliance which a surgeon may require, as well as on the distinctive details of any operation he may be called upon to perform. They are no less calculated to refresh the memory of the experienced surgeon than they are to instruct the inexperienced beginner. It is almost needless to add that the information on all the subjects included in the work is fully up to the date of its publication; it could hardly be otherwise under the authorship of so distinguished a surgeon as Professor Esmarch, whose professional reputation, though established many years ago in the field as well as in civil life, has been continually on the increase through the large amount of professional work he has done, and the scientific advances he has accomplished, in the surgical clinic of the University of Kiel, which still continues under his direction. As will be sufficiently seen from our remarks, we have little else but praise for the work—a sentiment which we believe every practical surgeon who examines it will endorse. We must also add a word in praise of the translator. Dr. Curtis has caught the spirit of the author, has maintained the distinctness and precision of style which characterises the original, and at the same time has Anglicised it in language so plain and simple that it will be followed by every English reader with the greatest ease.

If a fault were to be found with the book before us it would be that from the large dimensions of the volume it is too bulky as a handbook for military surgeons, for whose use it was originally designed, and to whom the utmost limitations of space are of essential importance. In this respect we prefer the third German edition itself, from which the translation has been made. The German edition is in two handy little volumes, each containing one of the two parts into which the present work is subdivided, and each light and small enough to be carried in a surgeon's pocket without inconvenience. For general use, however, in civil practice the volume before us is all that could be desired; the typography, illustrations, paper, and binding are excellent, and all alike worthy of the work and its author.

THOS. LONGMORE.

ARTICLE 640.

Memory and its Doctors. By Dr. E. PICK. London: Trübner & Co. 1888. Duodecimo, pp. 135.

WE learn from this work that the Greek poet Simonides (B.C. 470) is generally believed to be the inventor of mnemonics. This venerable art seems hitherto to have made small progress in the world; but since so much now depends upon examinations, and success in examinations is mainly due to successful efforts of memory, one would think that mnemonics must be worth the trouble of cultivating. The most powerful memory is burdened by the load thrown upon it. The accumulation of human knowledge in every department is so enormous that everything should be done to render its acquisition and remembrance easy. Had I my way I should at once introduce phonetic spelling and the decimal system of weights and measures, and generally rub away all points of artificial difficulty. Surely in pharmacy it is needless, if not dangerous, that one has to have a different exertion of memory for so many of the tinctures containing drugs that an overdose would be readily poisonous, and it is generally the most dangerous tinctures that vary most from the average dose. All the tinctures should be diluted to one common dose, from ʒj. to ʒij., and the same done with the infusions from ℥j. to ℥ij., and the useless varieties in the preparations of drugs should be reduced. But, simplify matters as we may, the medical man has still a great load to carry on his memory, even when he has thrown away most of the husks and draff needed to satisfy the crude hunger of the examiners for valueless facts or repetitions of words. I have no doubt whatever that a student, before beginning medicine, or in the course of his study of it, could much lighten his labours by making himself acquainted with the art of mnemonics. The principle of all systems of mnemonics seems to be taking advantage of artificial associations. Quintilian recommended that when you have a number of ideas to carry about in your memory you should choose a house and place the first idea in the hall, the second in the parlour, one idea at each window, another beside each statue, and so on. On mentally going through the house the ideas recall the objects and the objects the ideas. Another device has been to put things difficult to be remembered into rhymes which are words rendered easy to recall by associations of sound. The man who put in rhyme the number of days in each month deserves to have a monument erected to his memory.

In spite of all the boasts of success of teachers of mnemonics, to the best of our knowledge it has been very little used. Perhaps those who have tried it have expected too much; for, like every other art, it has its limitations. Such artificial aids to memory may be very useful in remembering some facts, but when one tries by their aid to recollect a great many facts, the different associations must cross and confuse one another. People sometimes say, for example, when they promise not to forget a thing, 'I shall tie a string round my finger in order to make me remember it,' and this might do very well to recall one thing; but suppose a person had so many things to recall that he tied a string round each finger, and then one round each toe, it is doubtful whether the power of the memory would be much increased by such devices.

A numerical power has been attached to each letter of the alphabet, and the date of a person's birth or death has been indicated by fabricating a verse or short sentence, the total letters of which, being added together, give us the date. The Hindustanis are skilful in this exercise, some of their *tarikhs*, as they are called, being very happy. Thus the *tarikh* of the birth of Shah Ismail meant in Persian 'a king of the earth,' and the *tarikh* of his death 'a king below the earth,' each giving the date and the Hegira.

The word given to recall the death of Socrates in Dr. Pick's book is so clumsy that we think he has chosen it to show the weakness of a rival system to his own. The same may be said of his example of the phrenotyping method of Beniowski, who suggests we should recall the name of Achillea Millefolium (the Yarrow) by thinking of a roof covered with snow, and an eagle with a thousand feathers; but then millefolium, in French milfoil, means a thousand leaves, and the plant is so named from its numerous lanceolate bi-pinnatifid leaves. Thus Beniowski's mnemonics association would really increase the difficulty of remembrance.

Dr. Pick claims to have a method of his own based upon natural rather than upon artificial associations. An idea, he observes, never comes back to the mind by itself but is always recalled by another. The facility or difficulty with which one idea recalls another depends upon the strength with which they blend together. Dr. Pick advises his students to concentrate their attention on as few ideas as possible at the same time, because the fewer ideas there are at the same time in the mind, the stronger they will be, and consequently the stronger the blending. He gives an instance of the way he would associate all the Latin masculine nouns of the third declension, and this is probably one of his happiest arrangements. When at school I was made to learn these exceptions by committing to heart some uncouth Latin verses. One thing, at any rate, is common with our author and some other professors of mnemonics, that they are very brief in explaining their system and diffuse in praising it or repeating the praises of others. In fact, their books are written to attract pupils, not to enable them to acquire the method from the book itself. Apparently mnemonics have been most frequently applied to the learning of languages. To apply the art to the sciences related to medicine, or to medicine itself, is a task not yet undertaken, though some teachers and lecturers have a way of putting things in a form easier of remembrance. Everyone knows the difficulty of committing by heart the facts of anatomy, and their readiness to glide out of the memory. I once framed a mnemonic system to hold in remembrance the origin and insertion of the muscles. Some of these have names which recall the origins and insertions; for example, sterno-cleido-mastoid, and genio-hyo-glossus. In learning these names one learns at the same time the attachments of the muscles. My plan was to associate names of this character with all the muscles. This I accomplished for most of them, though some of these new titles were very uncouth. But new words generally appear uncouth at first, and the names and the effort of naming them have made me remember the attachments of many of the muscles for twenty years.

It would take up too much room at the end of a review to explain my method farther. Should it appear worth while I may return to the subject.

W. W. Ireland, M.D.

Article 641.

A Handbook of the Diseases of the Eye. By H. R. Swanzy. Second Edition. H. K. Lewis. 1888.

Dr. Swanzy has attempted the utterly impossible feat of compressing a complete treatise into a space of 440 pages. It would have been difficult in this space to have said all that it was necessary for the ordinary student to know; but the author has aimed much higher, and has treated fully of many matters in connection with cerebral pathology that are still subjects of controversy, and has given an account of the physiology of the movements of the pupil, and of the modes of testing the light-sense, and of the probable value of the results. We do not complain of the insertion of these matters; on the contrary, we believe that they give the book a value as a book of reference; but we must point out that in a volume of this kind the full treatment of subjects like this must of necessity crowd out those which are more immediately important to students and practical surgeons. Refraction, for instance, might have been more freely dealt with; and the chapter on iritis is very meagre, considering the great practical importance of the subject; and we doubt if anyone would be able to diagnose lamellar cataract from the eight lines devoted to its description; no reference is made to the condition of the teeth commonly associated with it, and the treatment given is very meagre. Dr. Swanzy expresses very strongly his preference for making an iridectomy a part of the operation of extraction—a point in which we most decidedly agree with him. We are surprised to see that he recommends only three applications of a 2-per-cent. solution of cocaine before operation; we should like to hear the views of his patients on this point. The chapter devoted to paralytic affections of the ocular muscles is most excellent. The part devoted to concomitant squint is much less satisfactory. As an argument against Donders' theory of the connection between hypermetropia and the squint, the occasional occurrence of spontaneous cure is advanced; but this is certainly at least as inconsistent as the other theories. The treatment by convex glasses is dismissed in a very off hand manner, the author considering that 'in general it is by itself of no use whatever.' We suspect that cases of squint do not in Ireland come under treatment at so early a stage as is the case here, or Dr. Swanzy could hardly, we think, have arrived at a conclusion so diametrically opposed to that generally held; for our own part, we believe that the necessity for operation is daily being shown to be more and more rare. We find no reference to Snellen's coloured letters as a test for binocular vision. The test with the pencil held in front of a page of print is not quite reliable, as it sometimes fails to detect cases in which either can be used at will, but not both together.

We doubt whether the book will be a popular one with students, but we have no doubt whatever that it will prove of great value as a book of reference to physicians, on account of the excellent manner in which the more recent views on the significance of hemiopic affections is set forth, and to the practitioner from the admirable manner in which many of the operations on the lids are described. We only wish that Dr. Swanzy could see his way to giving us a larger treatise in which he could treat of all matters with equal thoroughness.

W. Adams Frost.

Article 642.

Des Rapports de l'Accommodation avec la Convergence et de l'Origine du Strabisme. By Professors Reymond and Stilling. Trübner. 1888.

This book is really compounded of two distinct pamphlets. The first, by Reymond, is devoted to investigations into the relation between convergence

and accommodation. The greater part of this is old and well-worn ground. A short section is devoted to the consideration of the range of relative accommodation in monocular subjects, and it is stated that the range is considerably increased chiefly in the negative direction—*i.e.* the solitary eye, turning inwards a given number of degrees, can relax its accommodation to a greater extent than would be possible for a pair of eyes converging to the same degree. By retaining the term convergence, the writer endeavours to shirk the true question. One eye of course cannot *converge*, and the internal rotation of one eye affords no measure whatever of the convergence effort that is being made, for the inward movement may be produced entirely by a lateral conjugate movement. It seems to us that neither author grasps the binocular nature of squint. Reymond speaks of the range of relative accommodation in the squinting eye being not inferior to that of the fixing eye, but being always displaced below the line indicating the convergence. The simple explanation is that the direction of the squint is not solely the result of an effort of convergence, but of convergence combined with lateral conjugate movement; for example, a squint of 20° is equivalent to a convergence effort of 10°, and a conjugate movement of 10°; and the relative accommodation must be calculated on a convergence of 10° and not of 20°. Over and over again Stilling speaks of the relaxation of *one* external rectus and of *one* eye assuming its position of rest, losing sight altogether of the fact that a nerve-impulse cannot be sent to one eye only.

Stilling, in the last third of the book, labours to prove that his theory of squint is superior to that of Donders. We fail to see a single additional argument or fact adduced in its favour since the author wrote a paper on the subject in Knapp's *Archives* for September 1886. Stilling's theory is that convergent strabismus in hypermetropia is not due to the refraction as such, but to the fact that the position of rest in hypermetropia is convergence, and that by assuming the position of rest the eyes are 'emancipated for the law of relative accommodation,' and are thus able to use the whole of their absolute accommodation.

From the examination of a large number of cases Stilling has come to the conclusion that the position of rest is seldom parallelism, but that it is usually convergence in hypermetropia and emmetropia and divergence in myopia. Hence he concludes that normal binocular vision is a 'continual struggle against natural obstacles.' In the same way the maintenance of the erect posture might be described as a continuous struggle against the tendency to fall down; but if the author means anything more than this he is not borne out by the facts, for, if his statement were true, fatigue would nearly always cause squint, and so would an anæsthetic. It is amusing to note the manner in which Stilling works out his case. He commences with a statement that parallelism of the visual axes is rare (it is probably as rare as true emmetropia), and gives facts in support of this assertion, but gives no evidence to show what amount of convergence or divergence is frequent. Later, to suit his purpose, he assumes that the position of rest in hypermetropia is *strong convergence*. The fact that when only one eye is present the law of relative accommodation does not appear to hold good (an appearance which, as we have seen, may be entirely delusive) is used as an argument that the eyes can be emancipated from the law of relative accommodation by giving up binocular fixation; and this theory is subsequently alluded to as a 'well-known fact.' Professor Stilling surely imagines that he is addressing a jury instead of writing on a scientific subject.

The objections to this theory are so obvious that they hardly require mention. If the position of rest is in some cases parallelism and in others strong convergence, there must be intermediate grades; how is it, therefore, that we seldom see slight degrees of squint? How is the fact to be explained that the degree of squint varies with the accommodation used? Surely, too, if the squinting position is that of rest, it is strange that the squint should usually disappear under the influence of an anæsthetic. We have argued this matter solely on Professor Stilling's premisses, but we think the statement that convergence is usually the position of rest in hypermetropia requires further proof than has yet been advanced. The tendency to convergence may be due to the fact that accommodation is constantly being called into play. W. ADAMS FROST.

ARTICLE 643.

On Cancer of the Uterus. Being the Harveian Lectures for 1886. By JOHN WILLIAMS, M.D., F.R.C.P., Professor of Midwifery in University College, London, Obstetric Physician to the Hospital, Physician-Accoucheur to Her Royal Highness Princess Beatrice, Examiner in Midwifery for the University of London, and late Examiner in Midwifery for the Royal College of Physicians and the Royal College of Surgeons.

THE author applies the term cancer to that form of new growth which most living pathologists distinguish by the name carcinoma, in contradistinction to sarcoma and adenoma. He is of opinion that, when it developes in the uterus, adenoma is 'perhaps always' malignant. Dr. Williams lays great stress on the distinction between different parts of the uterus and the employment of sound nomenclature to express that distinction. By 'the vaginal portion' he means the free surface only of the cervix, from the os externum to its vaginal attachments. The vaginal portion is invested with a layer of stratified squamous epithelium, becoming transitional at or near the os externum, according to circumstances. By 'the cervix' he signifies the canal between the os externum and the os internum, bearing a mucous membrane with columnar epithelium, and characteristic follicles, together with the deep tissue under the canal; in fact, all that has hitherto been understood as 'the cervix,' excepting the free surface in the vagina. Lastly, Dr. Williams distinguishes the 'body of the uterus,' with its cavity lined with a 'decidua' bearing tubular glands. The nature of the epithelium and the glands in a part subject to cancer is of primary importance, and in the case of the uterus we are not surprised to learn that the disease varies in its character according as it commences in one or other of the above-named divisions of the uterus.

To Ruge and Veit Dr. Williams awards the credit of having distinguished cancer of the vaginal portion from cancer of the cervix. Whilst admitting that cancer often involves the vaginal portion, the author has only observed eight cases where the disease has originated in that part. In these cases the cancer-tissue was found to be of the kind observed in squamous epithelioma of free mucous surfaces elsewhere.

The stratified epithelium was thickened; it had lost its superficial horny layer, and sent processes into the deeper tissues. The author describes certain special peculiarities due to the pathological phenomena which give rise to the well-known 'erosions.' Summing up his experience, Dr. Williams notes that cancer of the vaginal portion in its earlier stage may be perfectly smooth and only indicated by a slightly livid area. He can find no evidence that this local form of cancer may arise from a laceration of the cervix. It tends to remain superficial for a long time, and always advances towards the vaginal mucous membrane rather than up the cervical canal.

Dr. Williams carefully describes the nature of an 'erosion,' the once-dreaded 'ulceration of the womb.' 'It is like an extension of the mucous membrane of the cervical canal through the external orifice on to the lips, which are in health covered by stratified epithelium.' It is not the same thing as a portion of hypertrophied cervical mucous membrane bulging out of the os, but 'a structure like that of the mucous membrane of the cervix, placed on a surface which in health is covered by squamous epithelium.' The author has carefully described the singular manner in which the glands of the lower portion of the 'cervix' multiply, burrow under the squamous epithelium of the 'vaginal portion,' and send processes through that epithelium to the surface forming the little red points so often seen around an erosion. Indeed erosions appear to begin in this manner as a rule, rather than by direct extension downwards of the epithelium of the cervical canal. Dr. Williams describes two cases of adenoma of the cervix, involving deep structures, which were thoroughly malignant. Hence his observations on glandular growths and important epithelial changes in relation to erosions appear at first sight to prove that an erosion must in itself be a serious condition. This is contrary to experience, since it is so frequent and so harmless; moreover, he shows that cancer of the vaginal portion has none of the characters which he distinguishes in an erosion, being a squamous epithelioma. Of great interest is the author's case of cancer of a mucous polypus of the cervix. The polypus projected from the os, and its exposed surface, acquiring a squamous epithelial investment, had become the seat of squamous epithelioma. Dr. Williams finds that cancer of the cervix generally begins in the lower half and tends to grow outwards and downwards, involving the 'vaginal portion' and the vesico-vaginal and recto-vaginal septa; avoiding the mucous membrane of the vagina. He cannot find any satisfactory evidence that cancer of the cervix begins either in a laceration or in the everted or irritated surfaces of the lips of the os. Out of six cases of supra-vaginal amputation of the cancerous cervix, recurrence only took place in the stump in one instance. In the remaining five the adjacent connective tissue was attacked, and was found to be separated by perfectly healthy tissue from the equally healthy mucous membrane of the portion of the canal left in the stump. On this fact Dr. Williams bases his preference for supra-vaginal amputation of the cervix over total extirpation of the uterus, the latter being more difficult and dangerous, nor does it remove the part where recurrence most frequently occurs.

The author describes seven cases of undoubted primary cancer of the body of the uterus. This disease appears to be accompanied, or at least preceded, by metrorrhagia or sanguineous watery discharge for months, or even years, especially when, as is the rule, it sets in well after the menopause. The uterus is slow to enlarge and to become fixed. An account of a case of true adenoma of the body of the uterus is added to these cases; it occurred in the practice of Dr. Matthews Duncan. Cancer of the body of the uterus tends to avoid the cervix till late in its course, and may pass through the muscular wall into the broad ligament. Neighbouring structures may become involved after their union to the uterus by peritoneal adhesions, and secondary deposits are sometimes found in the lungs, liver, kidneys, and other parts. 'In cancer of the uterine body,' Dr. Williams observes, 'there is but one operative procedure which holds out any—the slightest hope—of a radical cure, and that is total extirpation.'

Enough has been said to show that Dr. Williams' work, 'On Cancer of the Uterus,' forms an important standard monograph of high scientific and practical value. Dr. Spencer, Mr. F. Collins, and Mr. Burgess have prepared fine illustrations demonstrating the naked-eye appearances of cancer of the different parts of the uterus, and the work is enriched by Dr. Boxall's beautiful series of drawings of microscopic sections.

ALBAN DORAN.

ARTICLE 644.

Anæsthetics, their Uses and Administration. By DUDLEY WILMOT BUXTON, M.D., B.S., M.R.C.P., &c., Administrator of Anæsthetics in University College Hospital, &c., &c. London: H. K. Lewis. 1888.

DR. BUXTON is undoubtedly correct in his statement that anæsthetics are, as a rule, employed without exciting so great a sense of responsibility as the difficult and dangerous nature of the duty should warrant. At the same time, it is not easy to see how his recommendation—not to allow anæsthetics to be given except by men who have been carefully taught and have obtained considerable experience—can be carried into effect. It reads almost like the time-honoured injunction not to go into the water before knowing how to swim. How far a book, however well written, may serve to inspire a proper sense of responsibility the author leaves us in doubt. After a brief *historique* of the discovery and introduction of anæsthetics, he attacks the preparation of the patient and the choice of an anæsthetic, both very important questions, though often beyond the control of the anæsthetist. He takes advantage of the opportunity to correct the notion that chloroform is necessarily the best anæsthetic agent for persons over sixty, and he prefers ether unless the pulmonary condition precludes its administration. Nitrous oxide is gone into at great length, and this chapter will be specially valuable from the fact that this agent is often treated very unceremoniously by authors. Ether and chloroform are, of course, dealt with in a manner commensurate with their importance, the different stages and indications of intoxication being very fully discussed. The various anæsthetic mixtures are alluded to, but, so far as we have been enabled to glean, the disadvantage attending the use of mixtures of liquids of different densities and widely different evaporating powers is not sufficiently insisted upon. After the mixtures come the combined methods—chloroform and amyl nitrite, chloroform and chloral, &c.—none of which, we believe, are in general use. A subsequent chapter is devoted to the consideration of anæsthesia in particular con-

ditions and for particular purposes. The chapter on cocaine is comprehensive, but it is curious that the author should mention only one death as attributable to its use, since such instances are now fairly numerous. He does not insist, either, on the danger which not unfrequently attends the use of even small doses in certain subjects. We would suggest, too, that he should recall the peculiar risk attending the use of the atomiser in throat operations—a method now generally abandoned. The name and experience of the author insure that the treatise, though of very moderate dimensions, may be relied upon to contain useful and reliable information on a subject respecting which medical students and even practitioners are generally lamentably ignorant.

ALFRED S. GUBB.

ARTICLE 645.

The Localisation of the Lesions of Phthisis in Relation to Diagnosis and Prognosis. By J. KINGSTON FOWLER, M.D.Cantab., F.R.C.P. J. & A. Churchill. 1888. Pp. 31.

THE voluminous treatises which have of late appeared upon the subject of tubercular phthisis, although seeming to deal with every aspect of the subject, have yet left one line of investigation untraversed. In the short but very carefully written monograph before us Dr. Fowler endeavours to show that the distribution of the tubercular lesions throughout the lungs in phthisis is by no means a matter of chance, but follows a definite 'line of march' from which it is only turned aside by some special conditions in the affected tissues themselves. Reference is made at the outset to the views on the subject previously expressed by the classic writers on tubercular phthisis, who one and all were content to leave the broad fact that the disease progresses from apex to base, without entering into any closer detail. The want of a uniform method of examining lungs *post mortem* is held to be the principal cause for the non-recognition of a definite distribution of the lesions hitherto, and the author gives a series of recommendations, founded on Virchow's teaching, as to the best method for universal adoption.

Certain anatomical points are noted and a few diagrams appended to show the true relation of the lungs to the chest wall, the lines of the interlobar septa being marked with especial precision. The seats of primary disease in the lungs are then considered, and the point made clear that apical disease does not always begin at the extreme apex but a little below it, and that it then tends to spread, not downwards, but backwards, and hence the importance of examining the supraspinous fossa in every case. Other primary apical lesions may spread directly downwards, along the anterior margin of the upper lobe, or vertically downwards from the outer third of the clavicle. Especial stress is laid on the fact that the upper part of the lower lobe in the lung first affected is very apt to become the seat of tubercular mischief almost as soon as the lesion at the apex has advanced sufficiently to give positive physical signs. The indications of disease of the lower lobe are to be sought at a point midway between the vertebral column and the posterior border of the scapula, on a level with the fifth dorsal spine; and the presence or absence of such indications in a case of undoubted lesion of the apex becomes of great importance, as showing arrest or progress from the primary focus of disease. The line of march follows the interlobar septa, which may be roughly indicated by the spinal border of the scapula when the arm on the same side is crossed over the chest in front, the hand being upon the opposite shoulder. Exceptions to these general lines are discussed, and the monograph ends with a consideration of basic phthisis, which is shown to be almost unknown as a primary condition, since in nearly all the well-recorded cases the base is shown to have been previously the seat of some inflammatory affection, and its power of resistance thus reduced. Dr. Fowler's work is compressed into short space, but every word is worthy of attention, as conveying ideas which have been carefully thought out and founded upon sound pathological facts. E. CLIFFORD BEALE, M.B.

ARTICLE 646.

On the Selection of a Climate for Patients with Pulmonary Tuberculosis. By FREDERICK L. KNIGHT, M.D., Assistant Professor, Harvard University. Cupples & Burd, 94 Roylston Street, Boston. 1888.

IN response to professional requests, Dr. Knight here records his own views as to the climatic treatment of phthisis in general, and the choice of climates for special, classes of cases in particular.

Although his experiences are founded on the results of treatment in America only, the conclusions to which he has arrived are well worthy the attention of those who make exclusive use of European health-resorts.

The main question is carefully discussed in all its bearings, whether a change of climate is likely to afford benefit or not, and clear indications are given of the conditions under which a change is not to be recommended. Facilities for an out-of-door life are essential, and if they can be afforded at a high elevation above sea-level the more marked are the results obtained. Advanced disease of the lung, tubercular disease of the larynx or intestine, cardiac insufficiency, whether from valvular disease or other cause, and any age after fifty, are regarded as conditions which contra-indicate a mountain residence, but for the early cases of tubercle of lung, whether hæmorrhagic or catarrhal, provided they have passed into a quiescent stage, and for convalescence after acute pleurisy, the atmospheric conditions of a high altitude are warmly commended. Caution is required where the disease is more advanced, and much depends upon the state of the heart's action. In all cases of doubt, the climate of Southern California is advised, since a warm and equable climate can there be relied upon and a gradual move can easily be made if desirable to the higher altitudes of that district. The tendency to renal disease or to rheumatism, although not as a rule aggravated by residence at a high altitude, may generally be taken as a contra-indication. Dr. Knight's monograph is short, clear, and concise; the subject is approached from the point of view of common-sense, and the work may be commended to the attention of practical readers.

E. CLIFFORD BEALE, M.B.

ARTICLE 647.

On Curvatures of the Spine. By NOBLE SMITH. London: Smith, Elder, & Co.

THE second edition of this little book is just published. Five years ago the first edition was issued

as a pamphlet; since then the author has added considerably to his work, but his views are practically the same. The chief value of the work consists in the complete manner in which the subject of lateral curvature is treated. In many instances the treatment can be carried on without the aid of any instrument; gentle exercise to the muscles of the back, combined with friction, and rest on a prone couch, will suffice in slight cases, but in moderately severe cases a spinal apparatus may be necessary, and should be constructed on the following principles:—To allow freedom of action to all the muscles of the back, and, in fact, of the whole trunk; to afford support to the back, in a good position, directly the muscles become fatigued; to be light and to allow free respiration, and, above all, it should be adapted by the surgeon himself. In more severe cases means may be employed to counteract the curves, or when no improvement can be expected the object must be to prevent the increase of further deformity.

Notes of some interesting cases are given, and an appendix is added on Preventive Treatment, containing directions for training children in muscular exercises, being quoted from *Sound Bodies for our Boys and Girls*, by William Blaikie. The small attention paid to the subjects of which Mr. Noble Smith treats, in works upon general surgery, induced the author to publish this book. It is one that every general practitioner should read, as such deformities are very prevalent, and much can be done for them if they are treated in the early stages.

RICHARD NEALE, M.D.

ARTICLE 648.

Th Electric Illumination of the Bladder and Urethra as a Means of Diagnosis of Obscure Vesico-Urethral Diseases. By E. HURRY FENWICK, F.R.C.S., Surgeon (Out-patient) to St. Peter's Hospital for Stone; Assistant Surgeon to the London Hospital. With Thirty Illustrations. London: J. & A. Churchill. 1888.

MR. FENWICK has produced an excellent treatise on what may be considered a new and distinct branch of surgery. Electric endoscopy is essentially clinical, but practically surgical; clinical, like the stethoscope, as a means of finding out rather than curing disease, but surgical in that it cannot be used without great manipulative dexterity and without many precautions. The author carefully describes the endoscope, its construction, and the batteries necessary to produce the light. As we read about 'elements,' 'cells,' 'chromi-sulphuric plunge batteries,' and further consider what the author has to say about protection of the vesical mucous membrane from heat, and about the cracking of the glass which covers the light, we feel how extreme specialisation is gaining ground in medicine and surgery. Electric endoscopy is no mere fad or mania, it is becoming established amongst experts; yet it evidently requires an aptitude for understanding a difficult branch of physics which the most dexterous surgeon and the most searching and experienced physician may be unable to acquire. Mr. Fenwick's work will enlighten all who read it, and will in addition be of fuller value to surgeons already skilled in the treatment of diseases of the urinary organs, the only persons who are fit to adopt this new and important method of exploration of the bladder and urethra.

ARTICLE 649.

Notes on Diseases of Women. By JAMES OLIVER, M.D. (Edin.), F.R.S. (Edin.), Member of the Royal College of Physicians, Assistant Physician to the Hospital for Women, London, &c. London: Hirschfeld Brothers. 1888.

THIS book consists of a series of more or less elementary essays on subjects relating to the diseases of women. The chapters on 'Facts Relative to Menstruation,' and on 'Sterility from a Physiological Standpoint,' are well written and most characteristic of the author's style. Dr. Oliver has evidently enjoyed the advantage of considerable clinical experience; it is therefore to be regretted that he has not included in the *Notes* a few records of cases. At page 94 we find an important statement not in accordance with the opinions of most pathologists. 'Sarcoma,' says the author, 'appears in the uterus more frequently than many authors would have us believe. Its supposed rarity has actually resulted from a negligence on the part of many to examine microscopically all tumours removed from this organ.' Undoubtedly much is overlooked, notwithstanding the industry and vigilance of pathologists who study uterine disease; and those who search for cancer only in portions of uterine tissue where naked-eye appearances, combined with clinical histories, indicate cancer are, of course, very likely to find carcinoma and to overlook sarcoma. Dr. Oliver claims clinical experience of uterine sarcoma; we hope, therefore, that he will publish his cases, with accurate drawings of the microscopical appearances of the morbid growths. A good monograph on uterine sarcoma would supply a distinct want. ALBAN DORAN.

ARTICLE 650.

Diseases of Women. By ARTHUR H. N. LEWERS, M.D. London: H. K. Lewis. 1888.

A SCIENTIFIC classification of the diseases of women seems impossible, and so, in this work as in others, we find some chapters devoted to a prominent symptom, while others are grouped anatomically or pathologically. On the subject of etiology Dr. Lewers has shaken himself free from the ponderous descriptions of the American school. At the same time we think more stress might be laid upon the most probable cause of a morbid condition. This has been done in some instances, but not in others.

The chapter on hæmatocele is a distinct advance on that in other text-books. Extra-uterine gestation is given a prominent place in the causation, instead of being looked upon as a remote possibility. But here, as in other chapters, the space devoted to treatment is far too short. We certainly cannot agree with the author that the treatment of inversion of the uterus by elastic pressure extends over two or three weeks. With a Barnes' or Aveling's repositor properly applied, it seldom exceeds as many days.

As a whole, the book is well and clearly written, especially that portion of it relating to diagnosis.

The illustrations are numerous and well done. We can confidently recommend it to students, to be supplemented at a later period by one of the larger treatises. J. INGLIS PARSONS, M.D.

ARTICLE 651.

Nature's Hygiene. By C. T. KINGZETT, F.I.C., F.C.S. Third Edition. Baillière, Tindall, & Cox.

THIS elegant work consists of 14 chapters or essays, which occupy 430 pages.

The first two chapters are introductory, and are intended to furnish such elementary chemical knowledge as is necessary to prepare a general reader for intelligent perusal of the rest of the work.

The next chapter is entirely devoted to a description of the composition of the atmosphere and to a consideration of the process of respiration in animals and plants.

The several varieties of oxidation—slow and rapid—dependent or independent upon the action of micro-organisms—form the subject of the fourth essay.

Then follows a chapter upon the various natural waters, upon the modes of purifying water—natural and artificial—and upon the chemical methods for analysing water. The composition and treatment of sewage is then discussed, after which the author devotes three chapters to infectious and contagious diseases, antiseptics and antiseptic surgery, and the treatment of the sick, the bearing of micro-organisms upon the causation of disease being fully dealt with. Thus the first part of the work is occupied. Part II. contains an exceedingly interesting account of the history and sanitary properties of the eucalyptus, a clear and comprehensive sketch of the author's researches on the action of air and oxygen upon essential oils, and an account of the manufacture and properties of Kingzett's 'Sanitas.'

The author regrets that chemists still continue to give erroneous descriptions of the products of oxidation of essential oils by atmospheric air. His researches distinctly prove that an organic peroxide is produced, which yields peroxide of hydrogen on contact with water.

Besides the above, there is a chapter on micro-organisms, considered in their relation to disease, and another on eucalyptus, pine, and camphor forests.

Interesting as it must be to all, to the sanitarian this work is invaluable, for all the burning questions of the day in relation to sanitary science are here discussed, in a perfectly impartial and scientific spirit; whilst, at the same time, a thoroughly practical tone is maintained in treating of measures for the prevention and cure of disease.

G. STILLINGFLEET JOHNSON.

NOTES ON BOOKS.

ARTICLE 652.

Transactions of the Obstetrical Society of London, vol. xxx., Part I.

IN this fasciculus an interesting case on the *post mortem* appearances of a phlegmon of the broad ligament is given by Dr. Arthur H. N. Lewers. The layers of the right broad ligament were found to be separated by exudation to the extent of 1½ inches. The peritoneum participated to a slight extent in the inflammatory process, and in the right ovary a small abscess was found, possibly an extension of the morbid process.

Scarlatina during Pregnancy and in the Puerperal State, by Dr. R. Boxall. The author found that women were most liable to the disease shortly before and during the first few days after delivery, but rarely after the first week. The incubation period is shortened if the attack comes on during menstruation, or shortly after the occurrence of labour. Occasionally infection occurs in pregnant women before delivery. Some slight differences were found between the symptoms of scarlet fever occurring during pregnancy and after delivery. When labour occurs during an attack, uterine inertia sets in, and *post partum* hæmorrhage is liable to take place. Involution of the uterus does not appear to be retarded, and, provided antiseptic precautions are taken, the lochia remain sweet. The fœtus usually escapes infection if the disease in the mother does not show until after delivery, and it may even escape, but not as a rule when the attack comes on before delivery.

J. INGLIS PARSONS, M.D.

ARTICLE 653.

An Address on Placenta Prævia. Read at the Annual Meeting of the British Medical Association, 1887, by ROBERT BARNES, M.D. Reprinted for the Author.

SINCE all cases of placenta prævia are not alike, but vary in their physiological aspects, so also must the treatment be varied to suit the individual case. Dr. Barnes was the first to point out the three zones of the uterus, and the difference in their action during parturition. He shows that the treatment of placenta prævia will vary, first according to the position of the placenta in relation to these zones, and, secondly, according to the position of the child; a third, and not always a minor factor, is the condition of the patient. He sums up as follows. The measures that come into successive use are—1. Rupture the membranes. 2. Apply a firm binder over the uterus. 3. A plug may be used to gain time, but it must not be trusted; watch closely. 4. Separate all the placenta that adheres within the lower zone, and observe closely. If no hæmorrhage, wait awhile. The uterus may do its own work; if not, dilate the cervix by the water bags. Again pause and observe. If Nature fail to deliver, we resort to the forceps, which gives the best chance to the child, or turn.

This monograph places a difficult question upon a natural and scientific basis, and should be read and digested by all who have to do obstetric work.

J. INGLIS PARSONS, M.D.

ARTICLE 654.

Aids to Dental Surgery. By ARTHUR UNDERWOOD. London: Baillière, Tindall, & Cox. No date.

Note-book for Dental Students. By JAMES RYMER. London: J. and B. Churchill. 1888.

THESE two little books may be considered together, both belonging to the same class of cram books. Even in that class, however, there are differences in degree, and these are exemplified by the two specimens before us. The first appears to us to be well done; the information which it contains is limited by its size, but is compact, and apparently well arranged and up to date. Manipulative dentistry is very properly excluded from its scope. As an adjunct to one of the larger manuals for a dental student, or as a handy book for the isolated country general practitioner desirous of knowing something about

the commoner disorders of the teeth, this little book may well be useful.

The second book is of a different nature altogether ; instead of a note-book for dental students it might well be called the Note-book of a Dental Student, and not a very brilliant one at that. We doubt whether that well-known teacher Mr. Gaddes will be particularly well pleased at the use which his quondam pupil has made of his lecture notes. Amongst other curious features connected with it is the habit of placing the names of authorities between inverted commas; thus '"Huxley" described,' '"Waldeyer" suggested,' 'Tomes,' 'Klein,' &c., which gives a singular appearance to its pages.

We have spoken somewhat severely of this book, for we take it as a bad sample of a thoroughly bad type. A book which any intelligent first-year's student could produce by 'boiling down' Tomes, and thickening the stock with a judicious infusion of Gaddes or any other lecturer, has no business to exist.

BERTRAM C. A. WINDLE, M.D.

ARTICLE 655.

Pocket Therapeutic Notes. Ferris & Co. Bristol.

THIS is a very complete and handy book for the pocket, of 160 pages, containing therapeutic notes on new drugs and remedies, improved pharmaceutical preparations, and medical specialities. It is divided into eight sections, comprising 'Notes on New Drugs and Remedies, &c.,' 'Notes on the Fluid Extracts of the United States Pharmacopœia,' 'Unofficial Fluid Extracts,' 'Formulæ of Soluble Tasteless Pearl-coated Pills,' 'Formulæ of Concentrated Mixtures for Convenience in Dispensing,' 'Comparative Table of Metric and English Weights and Measures, with short rules for the Conversion of one System of Weights into the Other,' 'Antiseptic Surgical Dressings,' and an 'Appendix with Supplementary Notes on New Drugs, &c.'

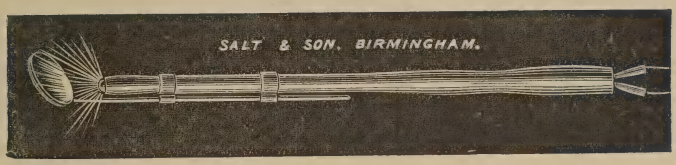
This booklet is of a very comprehensive character for its size, and, as an instance of this, it may be noted that in the list of soluble pills nearly *one hundred new formulæ* have been added. Everything referred to in this compendium is kept in stock by Messrs. Ferris & Co.,who fully maintain the character the firm has acquired for enterprise and pharmaceutical excellence during more than a century.

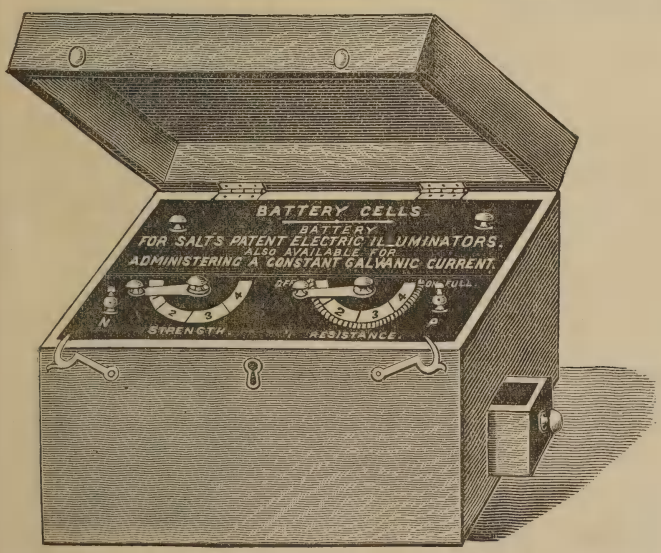
NEW INVENTIONS.

SALT'S IMPROVED 'COMBINATION' ELECTRIC BATTERY.

MR. SALT, of Birmingham, has recently contrived a new form of electric battery which promises to prove very useful to the medical profession. Within a small compass it combines the functions of a battery for faradisation (with poles for primary and secondary current), galvanisation, and illumination of surfaces or cavities for medical examinations.

For the last purpose Mr. Salt has arranged several modifications of the electric lamp, two of which are illustrated below, and are intended respectively for the inspection of the larynx and the palate; other forms he has designed for use with the speculum, enabling the surgeon to dispense with the patients' knowledge that he is using artificial light in the necessary investigations, and for throwing a direct ray of light on the point of a scalpel or other instrument used in operations.





The battery is small, light, and handy, and in ordinary use should last twelve months without recharging, and the price is moderate.

NEW PREPARATIONS.

MESSRS. BURGOYNE, BURBIDGE, & Co.'s NEW PREPARATIONS.

THE Soluble Podophyllin sent us by Messrs. Burgoyne, Burbidges, & Co. is a scale preparation of this useful product, which is readily soluble in water. As podophyllin is just one of those substances which, after a period of disuse, has come once again into favour, this preparation will doubtless fulfil an indication in its employment.

From the same firm we have received a sample of Monobrom Acetanilide, the product which it is proposed to use in place of antipyrin, many of the properties of which it possesses. It is in white acicular crystals, not unlike quinine in appearance.

MESSRS. BURROUGHS, WELLCOME, & Co.'s ANTIPYRIN TABLOIDS.

MESSRS. BURROUGHS, WELLCOME, & CO. have forwarded us a sample of their antipyrin tabloids, which, apart from convenience of dosage, &c., have the advantage of not being susceptible of adulteration after having left their hands. As many of the inconveniences which have from time to time been reported as following the use of this drug are attributable to the presence of impurities of one sort or another, this is an important attribute.

POUDRE LAXATIVE DE VICHY.

THE Poudre Laxative de Vichy, prepared according to the well-known formula of Dr. Léonce Souligoux, is a popular remedy on the Continent for chronic constipation. Two or three teaspoonfuls taken at bedtime in water insure a comfortable and satisfactory movement of the bowels without griping, flatulence, or other inconvenience. It affords an opportunity of obtaining the laxative effects of the Vichy water in a concentrated form.

LORIMER'S IODISED OIL.

MESSRS. LORIMER & CO. have submitted to us a sample of their Iodised Oil (oleum iodi), which is a solution of iodine in vegetable oil and water (10 grs. to the ounce). It is a useful embrocation where mild counter-irritation is required, as, for instance, over the apices of the lungs in pulmonary phthisis and in bronchitis, as well as in the treatment of neuralgia and chronic rheumatism. This preparation has the advantage of not staining or burning the skin, and it thus admits of being employed for enlarged glands in the neck, where the disfigurement resulting from the use of the ordinary preparations of iodine is undesirable.

MISCELLANY.

AN important work of medical biography, entitled 'Contemporary Medical Men,' with many portraits, will very shortly be issued in two volumes. It will be published at the office of the *Provincial Medical Journal*, Leicester, and will be edited by Mr. John Leyland.

EXPERIMENTAL RESEARCH.—A parliamentary paper, issued by the Home Office, contains a report showing the number of experiments performed on living animals during the year 1887, under licence, distinguishing painless from painful experiments. The total number of persons licensed to perform such operations in England and Scotland was 82, all (save one foreign graduate) graduates of a British university or fellows or members of royal colleges. Of these 64 exercised their right. The buildings where such experiments are allowed to be made are twenty-six in number—nine in London, nine in the provinces, eight in Scotland. The number of experiments was 1,220, of which 582 were performed without anæsthetics. These were, with very few exceptions, simple inoculation experiments, and were consequently painless. The experiments were—physiological, 237; pathological, 703; or therapeutical, 280. The number of cases in which pain has been unavoidably inflicted during experiments conducted under certificates dispensing with anæsthetics, or with the killing of the animal on recovery, was 71—2 being physiological, 21 pathological, and 48 therapeutical. Comparatively few vivisections properly so called—that is, involving a distinct surgical operation on a living animal—were practised during the year. In all cases in which such experiments have been performed under the certificate dispensing with the slaughter of the animal before recovering consciousness, it has been made a condition that the wound should be rendered painless by antiseptic treatment, and, that failing, that the animal should be destroyed. This condition has, the inspector believes, been faithfully fulfilled. The animals on which pain was inflicted were 2 cows, 12 calves, 1 cat, 32 rabbits, and 24 frogs. In Ireland there are only four persons licensed, and the experiments (11 in number) were all painless.

THE INEQUALITIES OF MEN.—M. Lapouge, of Montpellier, has recently delivered before the Faculty of Natural Sciences in that town a series of lectures on inequalities among men, in the course of which he said that the political dogma of equality rests on hypotheses which are utterly false. He distinguished four social types among mankind:—1. The initiators, who show mankind the way into the region of the unknown, and who go in front. Restless and daring, with an intelligence which is at least equal to the average, men of this type do not travel readily along beaten tracks. New ideas are the breath of life to them. They spend their lives in new creations; they are often wrecked, but the true genius represents the most perfect form of this type. 2. Men of spirit, of intelligence, who, possessing no creative power themselves, yet carry out and perfect the ideas and discoveries of the first type, to which they are really the complement. 3. Men who, with much or little intelligence, can work only with others, who mistrust every new idea not accepted by all the others, but who seize it with avidity when their neighbours adopt it. If intelligent these men are docile, but they dislike every change in routine, and they represent the dulness of the mass in the face of every reform. 4. Men of this type are not fit to attain even the smallest step in culture. Evidently every man cannot be classed under one or other of these divisions. In human societies clear lines of demarcation do not exist, but for general purposes the distinction is sufficiently evident. The superiority of a race or nation depends on the greater or smaller number of men of the first two classes. The race which is richest in the first type is the blonde dolichocephalic, and this has been the case even when the people among whom they lived were not of this kind. In Egypt, Chaldea, Assyria, Persia, India, and even in China, men of this type ruled. In the Greek and Roman world it was the same, and it is so still. In our own day the rank of a nation corresponds with the strength of the blonde dolichocephalic element. The Gallic and Frank elements which made France great were of this type, and it plays the same part in England, Germany, and America. Near these come the Semitic and Mediterranean races, who had reached a high grade of civilisation when the blonde dolichocephalic peoples were still savages. The remainder of mankind must be reckoned the passive races. The brachycephalic races of Europe, the Celto-Slavs, rarely produce men of the first intellectual type. In the social changes of recent years brachycephalic men, who form the lower classes, have been elevated and brought forward, and herein, the lecturer thought, lies the great danger of the future deterioration of the French nation. The existence of the superior blonde dolichocephalic type is threatened by amalgamation with the dark brachycephalic and inferior races.

The London Medical Recorder.

Article 656.

HEINRICIUS ON THE MODIFICATIONS OF THE RESPIRATION AND CIRCULATION BY THE SECTION OF THE PHRENIC NERVES.

By means of the apparatus designed by Kronecker and Marwald (described in the *Zeitschrift für Biologie*, Band v., 1887, p. 156) for the graphic registration of the diaphragm, Dr. G. Heinricius studied the effect produced on the respiration and circulation of rabbits by the section of the phrenic nerves (*Finska Läkaresällskapets Handlingar*, March 1888). Those animals as well as some cats and a dog on which Dr. Heinricius practised the section of the phrenic nerves easily survived the operation. The dog and cat especially bear the section well, as in these animals the respiration of the diaphragm is less pronounced. Though the full-grown rabbits survived the consequences of the operation, the young ones soon died of asphyxia. The section of one of the phrenic nerves is followed by paralysis of the diaphragm of the same side, but the contractions of the other side still go on without the respiratory muscles of the thorax augmenting their activity. The section of the second phrenic nerve provokes violent general contractions of the muscles. The respiration becomes thoracic; the diaphragm, following passively the movements of the thorax, is raised at the inspiration and lowered by the expiration. The superior arm of the lever of the diaphragm moves itself by means of the inspiration in the direction of the animal's abdomen, at the expiration towards the thorax, which causes the inspiration as well as the expiration to be shown on the cylinder in the opposite direction to that of the normal respiration of the diaphragm.

It was found in one experiment that the filling up of the abdominal cavity with a tepid solution of chloride of sodium caused death by dyspnœa, owing to the pushing up of the diaphragm. Another experiment showed the effect of section of the phrenic nerves upon the pulse. In a full-grown rabbit which had been treated with an injection of morphia, the phrenic nerves were exposed, and silk ligatures passed round them. The left carotid was then exposed and connected with a manometer, which noted the pulse and registered the blood-pressure on a kymograph. After the pulse had been registered, the phrenic nerves being intact, the nerves were cut, one after the other, while the curve of the pulse was registered upon the roll. By the aid of electric clockwork the seconds were at the same time noted on the paper.

On cutting the right phrenic nerve, the pressure of the blood was found to rise immediately, owing to the irritation produced by the sensory fibres of the nerve. In a little time the pressure returned to its previous condition, the state of the pulse keeping in correspondence. Section of the second phrenic nerve was immediately followed by important modifications in the number and character of the contractions of the heart; the pulse became like what is produced by irritation of the vagus nerve. The contractions of the heart diminished in frequency (54 in the minute), and increased in force, so that, though the number of contractions was less, each contraction impelled a greater quantity of blood into the arteries.

To what is this slow and strong pulse due? What causes the irritation of the vagus nerve after the section of the phrenic nerves? Does this irritation come from the centre of the vagus, or from the nerve-centres of the heart? The reply is not difficult to find when one recalls the modifications of respiration caused by the paralysis of the diaphragm and the violent dyspnœa and thoracic respiration following section of the phrenic nerves. Every considerable obstacle to respiration causes dyspnœa, and in all exaggerated dyspnœa the pulse is slow, owing to the irritation produced on the centre of the vagus nerve by the accumulation of carbonic acid in the blood in the absence of sufficient oxygenation.

In support of this opinion the author cites two experiments. In one the artificial respiration was established some time after the section of the phrenic nerves; the pulse was soon modified while the pressure of the blood was increased. The air entering in sufficient quantity into the lungs, the fluctuating pulse disappeared, and was succeeded by a feeble pulse of ordinary frequency, owing to the diminution of carbonic acid in the blood. The fluctuating pulse appeared again, although not so marked when the artificial respiration was suspended, and the frequency of the contractions of the heart increased while the dyspnœa still persisted.

Most of Dr. Heinricius' experiments were performed in the laboratory of Professor Kronecker, of Berne. The article is illustrated with seven plates.

W. W. Ireland, M.D.

Article 657.

MAURICE RICHARDSON ON NEPHRORRAPHY FOR MOVABLE KIDNEY.

Dr. Maurice Richardson, Surgeon to the Massachusetts General Hospital, describes in the *Boston Medical and Surgical Journal*, June 14, 1888, 'A Case of Nephrorraphy for Movable Kidney' with complete relief of symptoms. The contribution includes an excellent summary of the experience of previous writers, and is furnished with a very complete bibliography. His patient was a strong and healthy woman, married, and thirty-six years of age. For eighteen months she suffered from pain in the right lumbar region, and felt something moving about in the right side of the abdomen. The pain was constant, and aggravated by movement. All sorts of apparatus and supports were tried without relief. A movable solid body, the size and shape of the right kidney, could be felt on deep pressure of the right lumbar region when the patient was placed on her left side. It could be displaced very far to the left of the umbilicus and down into the pelvis; though not tender to the touch, it was painful when moved. The patient expressed herself in June 1887 as 'miserable and good for nothing in the world.'

On Sept. 22, 1887, nephrorraphy was performed. An incision was made six inches along the margin of the quadratus lumborum. The edge of that muscle was drawn aside and the circumrenal fat exposed, cut through, and separated, exposing the posterior surface of the kidney. 'The organ moved

up and down freely with inspiration and expiration, undergoing a displacement of about two inches, making it very difficult to apply the sutures.' Through the capsule of the kidney four silken sutures were passed by means of a round (? curved) needle, the kidney substance not being touched. The edges of the wound were then drawn together. The wound was closed tightly with superficial sutures, and covered with iodoform gauze and salicylic cotton dressings. There was no rise of temperature, and convalescence was rapid. The deep stitches were removed on Oct. 7. During convalescence there was some pain in the region of the kidney and in the wound. Relief of the symptoms immediately followed the operation, and no relapse had occurred when the patient was last seen (May 20, 1888). She was kept in bed till Oct. 30, 1887, when a special pad was applied.

Dr. Richardson states that the kidney was not fastened in its normal position, owing to mechanical difficulties which prevented it from being fixed sufficiently high. He stitched it two inches below its natural level. Landau has already referred to this difficulty; there is no reason why the kidney may not be sewn to the walls in a convenient position, lower than in nature. Dr. Richardson concludes by stating that in the majority of cases floating kidney simply requires a pad, and that in some cases even this is unnecessary, as there are no symptoms. Should the symptoms be unendurable, then nephrorraphy can be done with little risk and a good chance of permanent recovery. Finally, should this operation fail to relieve unbearable pain and distress, the offending kidney should, he thinks, be removed. [The extreme opinions of Dr. Lindner and the special truss for movable kidney of Niehaus are noted in the LONDON MEDICAL RECORDER for June 20, Art. 579.—*Rep.*]

ALBAN DORAN.

ARTICLE 658.

BRIGIDI ON A CASE OF FREE COMMUNICATION BETWEEN THE UMBILICAL VEIN AND THE RIGHT ILIAC VEIN.*

IN atrophic cirrhosis of the liver the portal circulation becomes more and more obstructed till copious transudation of liquor sanguinis leads to ascites. But after a time in a certain number of cases the ascites diminishes or disappears, the obstruction in the liver caused by the shrinking of the newly formed connective tissue remaining as great or greater than ever. The explanation pretty generally accepted is that the portal circulation is relieved by the establishment of a more or less free collateral circulation between the portal and systemic veins. The points at which this anastomosis may be developed are numerous :—

1. Between the superior and middle hæmorrhoidal veins, and the inferior and other neighbouring branches opening into the iliac vein.
2. Between the inferior œsophageal veins coming from the left coronary vein of the stomach, and the other œsophageal veins opening into the cava.
3. Between the hæmorrhoidal and vesical veins.
4. Between the coronary veins of the stomach and the gastro-epiploic, and the renal veins.
5. Between the vasa brevia, and the left inferior phrenic vein.
6. Between the pyloric vein, and the right inferior phrenic vein.
7. Between the superior mesenteric and the left renal.
8. Besides these, some veins taking origin in the intestinal parietes, instead of opening into the portal system, establish a capillary communication with the cava. This anastomosis has been called after the name of its discoverer 'the system of Retzius.'
9. And lastly, Sappey showed that a certain number of small veins arising in the stomach, gall-bladder, in the walls of the hepatic vessels, from the lower surface of the diaphragm, and from the upper half of the abdominal parietes, pass to the liver and traverse its substance, branching in the same manner as the portal vein. Sappey called these veins the 'accessory portals' and they have continued to be associated with his name.

Last year Professor Vincenzo Brigidi examined two cases of hepatic cirrhosis from the clinic of Professor Maragliano. In one there was a free anastomosis between the hæmorrhoidal and systemic veins, and in the other between the greatly dilated œsophageal veins. This year a third case has come under observation, in which there was a free communication between the umbilical vein and the right iliac vein.

In addition to the usual longitudinal incision, a transverse one was also made just above the umbilicus; and it was found that a large vein, covered only by peritoneum, had been divided. The lower end was injected to facilitate the tracing of its origin. When injected, it was as large as the little finger, and passed to the umbilicus. From there it passed downwards and to the right, dividing twice and again reuniting, and finally opened into the right iliac vein immediately behind Poupart's ligament. The upper half of the divided vein was then traced, and found to pass along the free margin of the suspensory ligament to the liver. A probe passed along it showed that it opened into the left branch of the portal vein, just where in the fœtus the umbilical vein opens. After a most careful search and dissection no trace could be found of the fibrous cord, which usually is all that remains of the obliterated umbilical vein; and hence it was concluded that in this case the obliteration had failed to take place, and that the large vein already described was in reality the umbilical vein which had remained pervious. In opposition to this conclusion, however, it is right to mention that Sappey expressed the opinion that all the recorded cases of free communication between the umbilical and epigastric veins rested on errors of observation and interpretation; and that in these cases the dilated vein was not the umbilical, but one of the accessory portal veins already described by him. Professor Giacomini in 1873 endorsed this opinion. He considered that the failure to find the fibrous cord, resulting from the obliteration of the umbilical vein, was not sufficient proof that the existing vein was the umbilical vein remaining, or having recently become pervious. The accessory portal veins, passing along the suspensory ligament in close contact with the fibrous cord, in their enlargement gradually absorb it and split it up.

And further, Professor Giacomini states that the umbilical vein in its course from the umbilicus to the porta neither gives nor receives any branch in

* *Lo Sperimentale*, April 1888.

the normal condition. The researches of Sappey and of Robin confirm this statement. This is a very important argument, for unless some communication with adjacent veins existed the umbilical vein could not remain pervious. But Dr. Bordoni has investigated the subject afresh, and his observations are confirmed by Professor Romiti. He found that in fourteen of seventeen cases the umbilical vein had anastomoses with branches of the epigastric. And this was so not only in infants a few days old, but also in bodies of infants five months and sixteen months old. Because of this divergence of opinion the author investigated the question afresh, using Richardson's injecting medium. In bodies of infants several days or months old he never failed to demonstrate the anastomosis between the branches of the epigastric vein and the umbilical; and with care this could be shown in bodies dead shortly after birth.

Hence, he concludes that when the communication between the vena porta and the iliac vein takes place by means of a vessel running along the free margin of the suspensory ligament, and opening in exactly the same place as the umbilical vein, and when in the suspensory ligament no trace of a fibrous cord representing the obliterated umbilical vein can be found, it is more reasonable to consider the vessel to be the umbilical vein which has remained pervious, than to be a dilatation of one of the accessory portal veins. H. HANDFORD, M.D.

ARTICLE 659.

RUNEBERG AND HOLSTI ON LEPROSY IN FINLAND.

AT a meeting of the Finland Medical Society, reported in the *Finska Läkaresällskapets Handlingar*, No. 1, Band xxx., Dr. Runeberg showed a patient who has been about two years in the hospital at Helsingfors, affected with the anæsthetic form of leprosy, *Lepra anæsthetica glabra*. This disease, which has disappeared from Central Europe, and also from Scotland, where it was once common, still prevails to a distressing degree in Norway. I was informed at the Leper Hospital, in Bergen, that there are known to be thirteen hundred cases of leprosy in Norway. In Finland it is now somewhat rare. The case shown was a man, 33 years old, who had suffered from syphilis about eighteen years before, for which he had been treated with mercury and iodide of potassium. This complication had probably something to do with the muscular atrophy which appeared, especially affecting the arms. It was attributed to myelitis. About the same time the sensibility of the surface began to be diminished, but it was not till several years after that the alterations of the skin characteristic of leprosy were observed. The patient, when presented to the meeting, had the face, shoulders, and arms covered with hypertrophied spots of a brown-red colour. In other places the skin was entirely without pigment and smooth. Both these kind of spots were completely anæsthetic. There were some small leprous ulcers in the feet and fingers, and well-pronounced ectropion in both eyelids. This is dependent upon disease of the cartilages, and is a very distressing symptom leading to sloughing of the cornea and blindness. Besides the wasting of the limbs there was now paresis of the muscles of the face.

Professor Holsti showed at the same time preparations taken from a patient who had died of lepra tuberosa, a man 20 years of age. The face had been the seat of small nodules and scars with little discolorations. The submaxillary glands were much swollen and hardened. There were ulcers and scars on the arms and legs. On the back of the tongue there were numerous white elevations, from the size of a pea to that of a bean, which did not go below the mucous membrane. There were also small nodules at the opening of the larynx and epiglottis. In the upper lobe of the left lung, under the pleura, there was a mass of fresh miliary tubercle, about the size of a pea. The rest of the pulmonary tissue was healthy. On making a microscopical examination, numerous lepra bacilli were found in the nodules on the face, in the spots on the back of the tongue, as well as in the submaxillary gland. None were found in the tubercular mass in the lung.

W. W. IRELAND, M.D.

ARTICLE 660.

REPORT OF FINNISH COMMITTEE ON THE PREVENTION OF VENEREAL DISEASES.

AS the question had been raised whether the prostitutes in the towns in Finland should remain under the control of the police and be still subject to medical inspection, a committee was appointed, consisting of three medical men, who prepared an elaborate and carefully considered report, which fills fifty pages of the *Finska Läkaresällskapets Handlingar* for May 1888. They take a view of what has been done for the prevention of venereal diseases in other countries, especially in France, Germany, Austria, and Scandinavia. From the medical reports of European armies they find venereal diseases to be worst amongst British troops, being 81 in the 1,000 yearly for syphilis alone. After this comes the garrison of Paris, which has 86 for all venereal complaints together. The garrison of Vienna has 73, and the garrison of Berlin has 39 cases of venereal diseases per 1,000. In the troops of Finland, from 1881 to 1887, there was a yearly average of 25 per 1,000 of syphilis and 51 of all venereal diseases. The yearly average of the same diseases in the Swedish army was 13 and 61 respectively.

The following is a translation of the conclusions of the committee :—

That syphilis exercises a considerable influence upon the general health and the death-rate of the community.

That prostitution plays a great part in the spreading of this disease.

That as prostitution, under existing circumstances, cannot be suppressed, it should, in the interest of public health, be placed under strict surveillance. The system of control consisting in the inscription and preventive inspection of prostitutes, the only plan tried as yet, although it has not entirely fulfilled its object, on account of the many secret prostitutes who escape control, is no doubt of much use. It has, however, some inconveniences.

That the said system, which ought not to be connected with that of concessionary brothels, may, in some respects, be improved. That the measures intended to complete or supersede this system consisting in surveillance of the contagion of syphilis

without preventive visits have not yet been tried, and apparently will not do for large towns. They imply for those in charge of such sanitary duties a competence which has not yet been realised in this country.

The question demands a careful and serious consideration in its hygienic, moral, social, and administrative relations. It would be most imprudent to abolish the regulations at present in force in the large towns without putting in their place other effectual and ripely considered measures. The public would suffer much, and for this the blind and rash partisans of thoughtless proposals would be responsible.

Helsingfors, April 1888. (Signed) A. HOMBERG. J. W. RUNEBERG, M.W. af SCHULTEN.

The report was presented to the Medical Society of Finland at their meeting on April 14, when it was ordered to be printed and distributed amongst the members. At their next meeting on April 21 the conclusions of the committee received the substantial approval of all the members save one.

W. W. IRELAND, M.D.

ARTICLE 661.

BERNARDINI ON HYPERTROPHY OF THE BRAIN AND IMBECILITY.

DR. C. BERNARDINI describes (*Archivio Italiano per le Malatie Nervose*, Fasc. i. and ii., 1888) a case of an imbecile, 21 years of age, of low stature, with a head so large that hydrocephaly was diagnosed. He was subject to frequently recurring attacks of fury. He died from exhaustion following enteritis. The brain was found to weigh 1,755 grammes ; the ventricles were not dilated ; the cortical grey matter of the brain was firm and denser than normal. The microscope showed an increase in the neuroglia, with atrophy and diminution in the number of nerve-cells, and also a scarcity, attenuation, and atrophy of the protoplasmic prolongations. The author at the same time found the large protoplasmic prolongations of the cells directed towards the centre of the hemisphere, while in the cortical matter of normal brains these prolongations are always turned towards the surface of the brain. Golgi considers that these histological appearances indicate an arrest of the cellular development.

Dr. Bernardini calls attention to the fact that there are very few cases in which a notable increase in the volume of the brain is combined with an arrest in the development of the mental functions. After giving a rapid sketch of the medical literature of the subject, he considers the physiological importance of the dimensions of the brain. He passes in review the cases of idiocy recorded in medical literature in which a study of the alterations seen by the naked eye have been followed by a microscopic examination. After comparing these recorded cases with his results, Dr. Bernardini concludes that the diminution of the number of the nerve-cells in idiocy and the changes in the form and number of their prolongations ought to be ranked as now sufficiently proved. As competent observers have in other cases of idiocy not remarked any alteration in the nerve-cells, he thinks it is probable that in some cases of idiocy the alteration is confined to a modification in the composition of the protoplasm.

W. W. IRELAND, M.D.

ARTICLE 662.

REICHERT AND FÜRBRINGER ON THE LOCAL APPLICATION OF CAMPHORIC ACID.

AT a meeting of the Berlin Medical Association, reported in the *Deutsche med. Zeitung*, No. 50, 1888, Dr. Fürbringer did not take so favourable a view of the healing properties of camphoric acid as Dr. Reichert had done ; yet he believed that for certain indications the drug would come into general use. He had tested the antiseptic and antipyretic properties of the drug as compared with other vegetable acids, such as salicylic, cinnamonic, and benzoic acid. These are all very closely related. On this occasion he was able for the first time to prove that salicylic acid may have an antiseptic effect. Comparisons with camphoric acid were unfavourable to the latter, in as far as it causes but a very slight reduction of temperature, and is, as an antiseptic, far behind any of the other acids. As to its solubility, only ·5 or ·6 per cent. can be obtained at a temperature of 10° C. One great disadvantage that it has in common with the above-named vegetable acids is that in the same degree as it becomes alkaline camphorate it loses its antiseptic value, in spite of its greater solubility. In alkaline solutions, therefore, no reliance can be placed in camphoric acid. Fürbringer's further more clinical examinations relate chiefly to the treatment of cystitis, especially when accompanied with ammoniacal fermentation. In about 50 per cent. of from 30 to 35 cases he met with an undoubted effect, not, however, on the pus-forming catarrh, but on the decomposition of the urine. The effect became more evident when solutions in water, and particularly supersaturated solutions or emulsions of the drug (2 per cent.) were thrown into the bladder.

The irritant effect of camphoric acid is very slight ; hence its value in removing uric acid fermentation. But salicylic acid gives the same results. Fürbringer has never observed any anti-catarrhal effect of camphoric acid, and has no faith in its lauded effect in sore-throat, acne, &c. The benign character of the disease may lead to the mistake. How such mistakes occur is proved by the following case. A doctor asserted at the time when the sublimate treatment was at its height of popularity that he had observed the most remarkable effect in the latter drug in the most diverse cases of catarrh. Fürbringer happened to examine one of these solutions, and to his astonishment could not discover a trace of sublimate. The doctor had, it appeared, used spring-water, so that all the sublimate had been eliminated in the form of insoluble tetroxyde. Yet for months the sublimate had been credited with the favourable termination of sore-throat cases. Fürbringer also tried camphoric acid in some typhoid cases, supposing that the contents of the intestines would be thereby disinfected. But though certainly a large number of bacteria were destroyed in the intestines, neither the typical course nor the fever was influenced by the camphoric acid. He increased the dose from a few centigrammes gradually, and proved that patients could take 3 grammes, nay, even from 5 to 6 grammes daily. He never could find any effect on the tubercular processes, but in 50 per cent. of phthisis cases the night-sweating was stopped by the drug, the effect being always prompt. One gramme may be given three or four times a day, or 2 grammes in the evening. In short,

camphoric acid, in Fürbringer's opinion, is a pleasant, non-poisonous antiseptic, which causes no irritation. It possesses no specific action apart from the favourable effect in the night-sweatings of phthisic patients, and it is cheap.

Dr. Reichert denied that the acid could be neutralised by the small quantity of mucus, as he gave the medicine in large doses. He was convinced that he had not been mistaken as to the effects of camphoric acid. He had treated himself again and again with camphoric acid for frequent attacks of sore-throat, and had always been relieved. If catarrh of the larynx is more quickly cured by camphoric acid, and if the latter is considerably more agreeable in its application than other astringents, while causing rapid shrinking of the tissue, then there can be no doubt as to the value of the drug. A specific action in tuberculosis is proved by the observations of Sormani and Bognatelli. JOHN ELLIOTT.

ARTICLE 663.

JACOBI ON THE THERAPEUTICS OF INFANCY AND CHILDHOOD.*

THIS is the sixth of a series of papers which Professor Jacobi is contributing to the above journal. He remarks that subcutaneous injections are best made in the abdominal wall, since the constant motion of the extremities is liable to set up irritation. Provided the liquid be clear, a simple puncture with an aseptic needle, followed by gentle friction, is sufficient to ensure absortion. The dose should be small, and the drug more diluted than in the case of adults. Numerous drugs are cited as having been followed by marked benefit when administered in this way, after having been discarded as useless when given by the mouth. For instance, strychnine for paralysis of the bladder and of the sphincter ani, and for diphtheritic paralysis of the respiratory muscles. Quinine salts must be in neutral solution ; the carbamide is the best since it dissolves in five parts of warm water. Saturated solutions should be avoided, because very frequently the water alone is absorbed, and the quinine remains as a foreign body in the subcutaneous tissue. Caffeine, in combination with salicylate or benzoate of sodium, has rendered splendid services in urgent cases of heart failure or pulmonary œdema of cardiac origin, but the combination is contra-indicated in cases complicated with cerebral irritation.

Inhalation, if used in the form of atomisers, should be introduced through the nose ; very little will reach a child's air-passages if used in the ordinary way. A simple way to provide a steamy atmosphere is to put the patient in a bath-room and keep the hot water tap turned on. An excellent inhalation for inflammatory conditions is chloride of ammonium, about a scruple of which should be burnt on a live coal every hour. Blisters are rarely required in children. They are specially contra-indicated in pharyngitis, in laryngeal catarrh, and in all forms of diphtheria. On account of the thin and irritable skin of infants, astringent ointments or powders are preferable to astringent lotions ; oleates should be avoided as they are apt to produce eruptions. When absorption is desired, lanolin is the best medium. In the very young, ice and ice-water applications are not tolerated for long. Applied to the cranium, the bones of which are very thin, they are often followed by collapse. The beneficial result may be obtained with greater safety by applying them to the occiput and nape of the neck. Hot fomentations or poultices to the head are equally dangerous.

R. W. LEFTWICH, M.D.

* *Archives of Pediatrics*, vol. v., No. 6.

ARTICLE 664.

SCHLANGE ON HYPERTROPHY OF THE PROSTATE.

DR. SCHLANGE presented at a meeting of the Berlin Medical Association three median sections sawn through the frozen bodies of patients who had died of hypertrophy of the prostate. (*Deutsche med. Zeitung.*) The first preparation was from a man aged 57 years, and showed a regular and moderate hypertrophy of all parts of the prostate gland. The urethra prostatica was, as in all such cases, much dilated vertically, and in the transverse contracted. Its length was further considerably increased. The course of the urethra from the symphysis to the mouth of the bladder formed nearly a completely regular arc of a circle. The second preparation exhibited the enormously enlarged prostate of a man aged 81 years. Here, too, the anterior, median, and lateral lobules were equally enlarged. The prostate gland occupied the greater part of the pelvis, and even protruded considerably above the line passing from the upper edge of the symphysis to the promontory of the sacrum. The enlargement of the anterior lobule gave the urethra a more extended course from the region of the symphysis to the prostate, resembling the arc of a circle with a comparatively large radius. On the other hand, the urethra prostatica was sharply curved by the hypertrophy. The fundus of the bladder, which was full, much hypertrophied, and marked with many deep fossæ, was much smaller than normally, the consequence being that the bladder touched anteriorly the abdominal wall and posteriorly the promontory. An important feature was its deep ectasia in the posterior section. Schlange pointed out particularly how easily this characteristic anatomical condition of the urinary organs accounted in part for the difficulty in passing urine. For if, as is usual in prostatic patients, the muscles of the bladder do not suffice to expel the urine, recourse is had to abdominal pressure and the action of the diaphragm. In this way, however, the urine is first forced into the posterior portion of the bladder, hence the above-mentioned posterior ectasia occupying the space between the promontorium and the middle prostate lobule. To deepen and extend itself further, the ectasia presses the intermediate portion of the prostate which lies over the internal orifice of the urethra, more and more forwards, so that the latter, resembling a closed valve, prevents the flow of the urine. The *third* preparation was particularly interesting, in so far as here the anterior lobule was the seat of the enlargement. The patient could only with the greatest difficulty be catheterised ; in fact the metal catheter could never be introduced into the bladder. In this case the course of the urethra was peculiar, running horizontally from the symphysis to the prostate, then suddenly at its entrance into the prostate gland ascending at an acute angle, and finally taking a direction parallel with the posterior wall of the symphysis.

With regard to the choice of catheter in hypertrophy of the prostate, Schlange considers it to be of the utmost importance to remember that an enlarged prostate differs from a healthy one by its complete fixation in the pelvis. Hence the channel that the catheter has to follow cannot, as in the healthy organs, be pushed in all directions, but is, as a rule, a fixed one, to which the instrument must accommodate itself if it is not (especially in inexperienced hands) to do serious injury. In the numerous cases similar to the first case demonstrated above, the metal catheter is very suitable if it has a rather large bend (*e.g.* the so-called prostate catheter). In cases such as No. 2 above, the difficulties increase, owing to the two different curves of the fixed urethra. Any metal catheter that had a bend similar to the first and larger curve would easily injure the posterior prostate lobule, whilst the anterior lobule would be injured should the bend of the catheter be a sudden one. Certainly a practised hand will nearly always accomplish the object with a catheter of a medium bend, the point of the instrument being carefully kept well along the anterior wall of the urethra. But the easiest and safest instrument in such cases is the flexible catheter with the simple Mercier bend. In such cases as No. 3 the use of the metal catheter is evidently impossible; but a flexible instrument may accomplish the object. But generally, as hæmorrhage from an injured prostate is by no means to be underrated, since it may directly threaten life, Schlange recommends those who have little practice in the use of the catheter to use in every case of hypertrophy of the prostate the flexible catheter with the simple Mercier bend, only of somewhat larger calibre.

JOHN ELLIOTT.

ARTICLE 665.

FREUDENTHAL ON THE CONNECTION BETWEEN CHRONIC NASAL OBSTRUCTION AND ABDOMINAL HERNIA.

THE *Monatsschrift für Ohrenheilkunde* for November 1887 and the three following months contains an interesting article on the above subject by Dr. Freudenthal, of New York. The author starts with the argument that there is scarcely any disease which so constantly increases the abdominal pressure as chronic obstruction of the nose and naso-pharynx. This he explains by the constant hawking, blowing, spitting, &c., which are necessary to remove the frequent collection of tenacious and hard secretion in the naso-pharynx. The author supports this theory of the causation of hernia by numerous cases. He first gives particulars of a family of seventy-seven persons; 22 per cent. of these suffered from hernia (thirty-three being under 20 years of age) and hardly more than one member of the whole family was free from some affection of the upper air-passages. It was the frequent association of nasal and hernial troubles amongst the members of this family that first drew the author's attention to the subject. In order to investigate it further he examined at the New York Hospital for Ruptured and Crippled 500 patients who were suffering from hernia; 143 of these had marked nasal obstruction in which surgical treatment was decidedly necessary; adenoid vegetations in children were included under this head. In one case scoliosis of the septum, produced by an accident, and giving rise to considerable obstruction of the left nasal cavity, was followed two years later by left-sided rupture. The author's explanation is that the latter was produced by the patient's efforts to clear away secretion behind the deviation. One man stated, without being questioned, that he acquired his hernia whilst blowing his nose, which was always obstructed, more forcibly than usual. The author also confirms previous observations that enuresis and chorea minor are caused by adenoid vegetations. In forty-five cases of adenoid growths the author found nocturnal incontinence in nine cases, whilst two patients had to rise frequently during the night to pass water. He operated in five or six of these cases, and in every one the incontinence was cured. The author also lays stress on the association of stammering with adenoid vegetations.

E. CRESSWELL BABER, M.B.

ARTICLE 666.

THE *POST MORTEM* IMBIBITION OF POISONS.

CAN we distinguish chemically whether poison has been administered during life or introduced into the body after death by an examination of the viscera? Such is the question that has engaged the attention of several eminent medical jurists on the other side of the Atlantic during the past year, and on which several important essays have appeared in the columns of the *Medico-Legal Journal*.

Lest it should be thought that under no circumstances could such a question really arise in actual practice we may briefly refer to the communication which formed the starting-point of the whole discussion. Dr. George B. Miller, in a paper in the *American Naturalist* in February 1886, put the hypothetical case of a person having died from a natural cause and been buried, and after a few weeks someone who had between the death and the burial secretly introduced arsenic into the body then circulated a report that the deceased had been poisoned, the report gradually gaining ground until the exhumation of the body was ordered and an examination made. It would admittedly be of the highest importance that such a fraud should be detected. Nor is this quite such a hypothetical case as might be supposed, for the defence that the poison had been introduced into the body after death has often been made in a trial for murder, and in one case, at any rate, the defence seemed to be founded on absolute fact, as the charge of murder was not proceeded with. The question may also arise under other conditions, as in the case narrated by Mr. Clark Bell,* who was consulted professionally under the following circumstances. An elderly man marries a wealthy maiden lady evidently for her money. After a time she dies with many of the symptoms of arsenical poisoning, and the husband immediately after death orders the body to be embalmed, and the whole abdominal cavity is filled with a solution containing arsenic. The physician in attendance had been puzzled, but, as the husband was a clergyman and much respected, the idea of poisoning had not entered his head; however, the wife had shown that she had suspicions of her husband, and had begged not to be left alone with him.

* *Medico-Legal Journal* for June and September 1887 and March 1888, papers by Mr. Clark Bell, Prof. J. J. Reese, and Dr. George B. Miller.

Her relatives made a searching inquiry, which resulted in showing that the symptoms of her illness were consistent with arsenical poisoning, but owing to the embalming process it was thought that an autopsy would be of no use. It was also ascertained that the husband had made several marriages before, in two of which deaths had occurred in a similar manner, immediately followed by a like process of filling the abdominal cavity with arsenic in strong solution under pretence of embalming, but no proceedings had been instituted, though strong suspicions had been entertained by the relatives in one instance. The experts to whom the matter was referred agreed that, though they had little doubt of the guilt of the husband, the difficulty of proving the case against him was too great to justify them in advising a prosecution. He is still at large, therefore, and Mr. Bell concludes his account of the case by stating that he has married again. The question that Mr. Bell put and invited answers to, is whether it would be possible to detect and differentiate between the poison which caused death and that which was introduced under pretence of embalming the body, and he points out that as soon as a differential diagnosis can be made the body can be exhumed and examined, for it must contain enough arsenic to preserve it for many years to come.

In the following number of the same periodical appeared a paper by Prof. J. J. Reese, in which he stated his belief that such a discrimination as that referred to above could not be made relying upon chemical analysis alone, but he made the following suggestions as bearing upon the elucidation of this most intricate problem. 1. A knowledge of the symptoms if obtainable would frequently throw much light on the case, but too much stress should not be laid upon symptoms as the symptoms in disease sometimes closely resembled those of poisoning. 2. The discovery of the poison in the urine might be regarded as very conclusive evidence of *ante mortem* poisoning, as though the bladder might become contaminated by *post mortem* imbibition, it was hardly probable that the poison would percolate through the coats so as to contaminate the urine. He admitted, however, that he could not dispute the possibility of such an occurrence. 3. The finding of the poison on the exterior of organs and not on their interior, would be good evidence of *post mortem* imbibition since in an *ante mortem* case the poison is always deposited on the interior of an organ, quite as much as on its exterior; but in practice this would be a very difficult matter to decide. 4. The discovery of poison in the stomach would not be a proof of *ante mortem* poisoning.

These somewhat slender threads on which to base a differential diagnosis (and on which it may be observed Prof. Reese did not lay much stress, but rather put them forward in a tentative way) have been blown to the winds by Dr. George B. Miller.

In the March number of the same journal that writer details the experiments he made on rabbits in order to solve the question at issue. The œsophagus of a rabbit was opened immediately after death and a tube passed into the stomach. Down this tube the solution of arsenic was poured, the tube was withdrawn and the œsophagus ligatured below the incision into it. The brain, spinal cord, and urine were examined from rabbits thus treated that had been buried for thirteen, twenty-four and twenty-nine days, the result being that the presence of arsenic was conclusively demonstrated in every specimen examined. He concludes that it has been demonstrated by his experiments that when a poison is introduced into the stomach it can actually imbibe, soak, and diffuse itself into the various organs of the body, and can be recovered from the liver, kidneys, spinal cord, brain, and interior of the urinary bladder. He thinks that in future chemical evidence must not be given the highest place as has hitherto been the case, but he holds that the microscopist may perhaps be able to discover some permanent appreciable difference, for it is not improbable that there may take place certain specific changes in the histological constituents of an organ due to the deposition of a substance like arsenic through the medium of the blood circulation during life, which changes would not manifest themselves as the result of an after death deposition.

The outcome of it is that it is pretty clear that we shall never be able by a mere examination of the dead body to give such evidence as would enable a jury to convict, and we should recommend Mr. Clark Bell to keep an eye on his clerical Bluebeard, and next time that that gentleman becomes a widower to step in and prevent the so-called embalming process from being carried out.

Article 667.

MORE MADDEN ON MYXOMA OF THE CHORION.

At the last meeting of the Section of Obstetrics at the Royal Academy of Medicine in Ireland for the summer session of 1888, Dr. More Madden read a paper on myxoma of the chorionic villi, or vesicular mole, as a practical contribution to the study of the still obscure pathology of embryonic death. Having first described some cases of myxoma of the placental chorionic villi recently met with in his hospital practice, the lecturer proceeded to point out the general importance of placental disease as a most frequent cause of intra-uterine death and abortion. He said that it would be superfluous to dwell on the importance of this still neglected field of investigation, or to do more than observe that being, as it is, the sole medium of vital communication between the fœtus *in utero* and the mother, any deviation from the normal condition of the placenta by which its development may be arrested and its physiological action impaired or perverted must be of serious consequence either to mother or child or to both. Amongst the diseases of this organ affecting the mother as well as the child are inflammations of the placenta, especially chronic or subacute placentitis, leading to morbid adhesions between the afterbirth and uterus, and occasionally giving rise to the two most serious complications of parturition—viz., *post partum* hæmorrhage and inversion of the uterus. Another placental disease of no less importance to the mother than to the child is congestion, sometimes resulting in hæmorrhage or placental apoplexy; whilst amongst the placental diseases which chiefly affect the fœtus by impairing or destroying the structural integrity of this organ are œdema, atrophy, and hypertrophy of the afterbirth, and the various forms of degeneration—fatty and calcareous; and, above all, that which was met with in this case—viz., myxoma or cystic degeneration of the placenta, or chorionic villi. In his own practice he had now met with six cases of this disease, the

infrequency of which appears from the following table :—

Authority.	Cases admitted into the Rotunda Hospital.	Cases of Hydatidinous Disease reported.
Dr. Collins	16,654	—
Drs. Hardy and M'Clintock	6,634	1
Drs. Sinclair and Johnston.....	13,748	4

Thus it appears that in 31,036 cases admitted into the Lying-in Hospital there were only five instances of hydatidiform mole recorded, being in the proportion of 1 in 6,207 cases.

Vesicular disease of the placenta consists in myxomatous degeneration and abnormal development of the placental chorionic villi, either following or producing the death of the fœtus. In the *Dublin Obstetrical Transactions* Dr. More Madden had already related some cases of this kind. In most of these the hydatidiform mass was expelled from the uterus in the fifth month of pregnancy. The symptoms of this disease can at first hardly be distinguished from those of ordinary pregnancy. If, however, in addition to the signs that usually denote the death of the fœtus, the patient experiences occasional gushes of water together with slight hæmorrhage from the uterus, lasting for a short time and recurring at irregular intervals, we may suspect the existence of vesicular disease in the placenta of a blighted fœtus. The expulsion of these growths from the uterus is generally attended with severe hæmorrhage. With regard to their origin, it would be useless again to review the countless theories that have been put forward at different times. For his own part, Dr. More Madden still adhered to the views he first published several years ago, that in the vast majority of cases those growths originate in cystic degeneration of the chorion villi of a blighted ovum ; but at the same time he also believed, although his opinion has been controverted by others, that vesicular growths, apparently similar to those resulting from chorionic disease, may in some exceptional cases also possibly be found *in utero* under circumstances that preclude their origin in embryonic disease. And in such cases Dr. More Madden holds that they probably originate in the ovary of the unimpregnated female from abnormal nutrition and perverted or monstrous development of a Graafian vesicle, the ovum, when expelled into the uterus, there becoming adherent, and abnormally proliferating, until by its bulk expulsive action is occasioned.

In the way of treatment Dr. More Madden knows of nothing that can be done to arrest the progress of the disease, but an attempt should always be made to prevent its recurrence by improving the general health of the patient by alteratives and ferruginous tonics, especially any of the saline chalybeate waters, such as Kissingen, Spa, Tunbridge Wells, or Lisdoonvarna. It may, moreover, be added that in these cases, as well as in the treatment of almost every other frequent cause of repeated intra-uterine death and abortion, a mild, long-continued mercurial course is commonly indicated. This may best be carried out by giving the bichloride of mercury in small doses (one twenty-fourth of a grain) in tincture of bark, which when thus administered, according to Dr. More Madden's experience, generally proves the most effectual alterative.

It has been recommended that the expulsion of these so-called vesicular moles should be brought about as soon as they are discovered. This, however, is clearly wrong practice ; for it is quite possible that only a portion of the placenta may be affected ; or, as the writer has seen, the birth of a healthy living child may be followed by the myxomatous placenta of a blighted twin conception. Hence, even if this disease could be diagnosed at any time during the period of pregnancy, nature should still be allowed to take her course, rather than the risk should be run, by unnecessary interference, of destroying a fœtus which experience has shown may possibly co-exist with the vesicular growth.

In the discussion which followed the reading of the paper, Dr. Harley mentioned the case of a virgin who had these hydatiform moles expelled. He also mentioned the case of a woman forty years of age, who he believed was not pregnant, but from whom a hydatidiform mass was expelled. Dr. Macan said that he could not agree with the statement that there had been no conception.

SURGERY.

RECENT PAPERS.

668. VLADIMÏROFF, DR.—A Case of Radical Cure of Umbilical Hernia by Laparotomy Performed for Ovarian Tumour. (*Vratch*, No. 8, 1888, p. 157.)

669. MISHTOLT, DR. A. D.—Concerning the Treatment of Anthrax. (*Meditzinskia Pribavleniia k'Morskomiï Sbornikiï*, February 1888, p. 160.)

670. ASTASHEVSKY, DR.—Case of Hydatids of the Omentum ; Laparotomy ; Drainage ; Recovery. (*Vratch*, No. 13, 1882, p. 252.)

671. TROIANOFF, DR. ALEXIS A.—A Case of Comminuted Depressed Fracture of the Skull. (*Vratch*, No. 4, 1888, p. 75.)

672. GRATCH, DR. NIKOLAI S.—A Contribution to the Literature of the Penetration of the Abdominal Cavity by Horned Animals. (*Med. Obozr.*, No. 2, 1888, p. 192.)

673. INDÜTNYI, DR. P. V.—Case of Perforating Wound of the Abdomen with Prolapsus of Intestine. (*Vratch*, No. 13, 1888, p. 244.)

674. SPAETH.—On the Treatment of Indolent Ulcers by Multiple Incisions. (*Practitioner*, May 1888, p. 332.)

675. SALTZMAN, DR.—Cases of Extirpation of Goître. (*Finska Läkaresällskapets Handlingar*, No. 5, 1887.)

ART. 668. *Vladimiroff on a Case of Umbilical Hernia Incidentally Cured by Laparotomy for Ovarian Tumour.*—At a recent meeting of the Russian Pirogovian Chirurgical Society Dr. Vladimïroff, of St. Petersburg, communicated (*Vratch*, No. 8, 1888, p. 157) an instructive case which had come under his observation at Professor A. I. Lebedeff's clinic. A pale, exhausted, tall peasant woman, of 33, married at 22, and normally delivered nine times, was admitted on account of severe dyspnœa caused by an abdominal tumour which had made its appearance, simultaneously with an umbilical hernia, two years before, and had been growing at first slowly, but subsequently rather rapidly. On examination there were found two hernial swellings in the umbilical region, one being of the size of a man's fist, another of that of a hen's egg. The circumference of the abdomen at the level of the navel measured 102 centimètres, the distance between the ensiform cartilage and the navel 22, and that between the latter and pubes 21. In the hypogastric region there was felt a large, hard, knotty, almost immovable tumour, which was diagnosed as a cysto-

sarcoma of the right ovary. An incision into the abdominal integuments along the linea alba from the navel down to the pubes being made, a good deal of fluid escaped from the wound. The tumour was punctured by a trocar, and, after the incision had been prolonged upwards across the hernial sac, dragged out of the abdomen. Having applied two temporary ligatures in the upper portion of the wound (to prevent any prolapse of bowels), Prof. Lebedeff divided the (thick) pedicle into four portions, ligatured them, cut the pedicle above the ligatures, and returned the stump into the abdominal cavity, which was then closed by an uninterrupted catgut suture and by 24 superficial (cutaneous) silk ones. The operation lasted 1¼ hours. The tumour measured 25 by 22 centimètres and weighed 3,580 grammes. The patient's recovery did not present anything abnormal beyond slight rises of the temperature. On the tenth day the sutures were removed; on the fifteenth she got up; and on the twentieth she was discharged quite well, with a firm scar and without any trace of an umbilical hernia.

669. *Mishtolt on Carbolic Acid in Anthrax.*—In the *Meditzinskia Pribavleniа k' Morskomiï Sbornikiï*, February 1888, p. 160, Dr. A. D. Mishtolt, of Nikolaëv, records the case of a well-nourished woman of 21, who was admitted to the local Marine Hospital on the fifth day of facial anthrax with high fever, extreme prostration, incessant sickness and giddiness, and all other symptoms of a grave general infection. The pustule, of the size of about a shilling-piece, was situated in the region of the zygomatic process of the left upper jaw. It was encircled by a fairly broad zone of induration, while the corresponding cheek, eyelids, and frontal region were greatly swollen, and the parotid and submaxillary glands enlarged and painful. Raimbert-Jarnovsky's method of treatment was resorted to without delay. A 2-per-cent. solution of carbolic acid was deeply injected at four spots around the pustule, one syringeful at each, the injections being repeated twice during the first day, and once daily during the next three days. The parts were also covered by compresses soaked in a 5-per-cent. carbolic solution. A striking local and general improvement took place so soon as the second day. About the eleventh day of the disease the temperature permanently returned to the normal level, and the general state became satisfactory. The infiltration, however, disappeared but gradually. After a five-weeks' stay at the hospital the woman was discharged with a 'scarcely visible, smooth, and superficial scar.' Having reviewed successful results obtained from the carbolic treatment of malignant pustule by Russian practitioners during the last twelve years, Dr. Mishtolt does not hesitate to predict that the method will soon supersede all the old ones, such as excision, cauterisation by actual cautery and caustics, &c., with all their discomforts and disfigurement.

670. *Astashevsky on Laparotomy for Hydatids of the Omentum.*—At a meeting of the East Siberian (Irkütsk) Medical Society Dr. Astashevsky read a paper (*Vratch*, No. 13, 1888, p. 252) on the case of a pupil of the local Ecclesiastic College, aged 22, who had been admitted on account of a steadily increasing and occasionally painful abdominal swelling of two-and-a-half years' standing. The left hypochondrium was found to be occupied by a tender, tense, fluctuating, knobby tumour. It was dull on percussion; 'on auscultation there was heard a vibratory sound of hydatids'; an exploratory puncture drew out a 'liquid fluid which did not contain any proteid bodies.' A hydatid of the abdominal cavity, possibly that of the spleen, was diagnosed, and a week later the operation was performed. An incision two inches long was made through the abdominal wall at the most prominent spot of the swelling. The peritoneum having been opened, the cyst was exposed and stitched to the abdominal wound with eight sutures (in order to prevent any contents penetrating into the peritoneal cavity). The sac being incised, about five litres of a turbid fluid containing a number of daughter-cysts, varying in size from a nut to a hen's egg, poured out. Having cleared the fairly capacious sac of all remaining accessible cysts with the fingers, the operator washed out its cavity with a boracic solution, inserted a drainage (tracheotomic) tube into the wound, and applied an antiseptic dressing. For sixteen days or so numerous cysts continued to escape from the wound. The cavity gradually contracted and filled up with granulations. On the fifty-second day the patient was discharged with a small sinus admitting only a finger's tip. When seen three months later he was well, the wound being found to be completely closed. Dr. Astashevsky thinks that the hydatid was situated in the omentum. It could not be connected with the liver, since there was present a resonant zone intervening between the dulness of the tumour and that of the liver; nor with the spleen, since the latter was lying only in contact with the sac, without being adherent to it; nor with the stomach, since any gastric disturbances were absent; nor with the bowels, since no intestinal troubles were ever complained of.

671. *Troianoff on a Case of Comminuted Depressed Fracture of the Skull.*—At a meeting of the St. Petersburg Society of Russian Practitioners Dr. Alexis A. Troianoff, house surgeon to the Obükhovsky Hospital, read a paper (*Vratch*, No. 4, 1888, p. 75) on the case of a butcher's assistant, aged 19, who had been brought in in an unconscious state, with a quiet, muttering delirium, fever (39°·2 C.), dilated immobile pupils, congested face, and involuntary defæcation and micturition. On examination there was found a swelling, of the size of a hen's egg, situated in the left frontal region, in front of the coronary suture, and near the middle line. In the middle of the swelling a small contused lacerated wound was seen. It was covered with a grey slough and discharged a purulent fluid. Having carefully removed the slough, and introduced a probe, Dr. Troianoff was able to make out the presence of a large defect with a deep depression of fragments. Without any delay the patient was brought under the influence of chloroform, and the swelling was cut through by a longitudinal incision, reaching down to the bone. The pericranium having been reflected, a quadrangular hole presented itself, with the fragments deeply embedded and firmly fixed in the brain-substance. Since these could not be extracted otherwise, the author enlarged the hole by a chisel (after Roser's rules), removed the fragments, with particles of bruised brain-substance adherent to them, and scraped out the whole wound with a sharp spoon, the total procedure being performed under a constant irrigation with a 3-per-cent. carbolic solution. After washing out the wound with a corrosive sublimate solution (1 to 1,000), an antiseptic dressing was applied. On the next day the patient recovered

his consciousness and stated that he had been hit on his head by a large and heavy iron hook. On the fifth day the temperature (which showed some slight rises after the operation) returned to the standard. The wound rapidly filled up with healthy granulations, and on the fortieth day was found to be completely healed by a firm, painless scar. The patient was quite well when shown about 76 days after the operation to the said society. Dr. Troianoff justly attributes so successful an issue of his extremely grave case to a speedy, energetic interference in accordance with the teachings and practice of modern brain-surgery. If left alone the case would have terminated fatally in a couple of days, since there was present, beside a most serious pressure on the brain, an incipient purulent inflammation of the pia mater and brain in the neighbourhood of the fracture, which might most easily have passed into a diffuse one. Such cases as Dr. Troianoff's are certainly most promising and encouraging, since they give simple and unmistakable illustrations of the fact that the not very remote proverbial powerlessness of the average medical practitioner begins to give place to something like real and serious curative power and skill.

672. *Gratch on a Case of Perforating Wound of the Abdomen, Inflicted by an Ox's Horn.*—In the *Med. Obozr.*, No. 2, 1888, p. 192, Dr. Nikolai S. Gratch, of Danilov, describes the case of a weak and emaciated peasant woman, aged 55, who, when waiting on a village road for a herd returning home, was suddenly attacked by an ox, which threw her up in the air, caught her on one of his horns, and then tossed her about on the road for several moments before aid could arrive. The woman got up by herself, and was even able to walk home, 'feeling all the way that something warm and moist was dangling between her thighs,' but, on reaching her staircase, she became so faint that it was found necessary to carry her up and to send at once for a clergyman and for the writer. When seen by the latter, seven hours later, the woman lay on a dirty palliasse on the dirty floor of her hut. She was in a state of collapse, had a weak, uncountable pulse, pinched face, and scarcely audible voice, and complained of epigastric pain. Her chemise having been divided with scissors, a 'large mass of distended, partially quite dry, intestinal loops presented itself, covered with another soiled and blood-spotted chemise.' The prolapsed mass being pushed aside, an extensive triangular flap consisting of the abdominal integuments alone was found, with its apex about two centimètres from the pubes, while its sides ascended from this point obliquely across the inguinal regions to terminate somewhere on the line dividing them from the corresponding infra-umbilical lines. The abdominal wall was perforated through all its thickness, only about the left angle of the triangle. There were, besides, some superficial bruises about the thighs. Having administered twenty-five drops of simple tincture of opium (Ph. Ross.) in two doses, Dr. Gratch washed out the protruded mass (which seemingly included a portion of colon) with a tepid solution of corrosive sublimate (1 to 5,000), then carefully examined the parts in regard to their integrity, and returned them, without any special trouble, into the abdominal cavity, closing the perforation with several superficial and deep sutures, and applying an iodoform dressing. The after-treatment consisted only in the internal use of the opium tincture (five drops four times a day), cold milk diet, and strict rest in a supine position. Recovery proceeded so satisfactorily that on the fourth day she could be safely removed to the town hospital. The temperature never rose above 38° C., and became normal on the seventh day, about which time also regular action of the bowels was established. On the eleventh day all sutures were removed. When seen about six weeks after the accident the patient was quite well, but was obliged to wear a supporting abdominal bandage since, otherwise 'she felt some peculiar weight in the hypogastric region when walking.' Dr. Gratch is not very sure whether his patient's recovery from her severe injuries could be attributed solely to the antiseptic precautions adopted, since the woman's surroundings up to her removal to the infirmary were quite the reverse of hygienic, and all his cleansing and disinfecting manipulations could only be carried out on a dirty floor and in semi-darkness, contributed by a dwarf petroleum lamp and a tallow candle. In common with other Russian country practitioners, Dr. Gratch thinks, generally, that 'rustic dirt is not so dangerous as the doubtful cleanliness of infirmaries,' and that hence 'bad hygienic conditions of villages must not be regarded by the surgeon as an obstacle to surgical operations.'

673. *Indiitnyi on a Case of Perforating Wound of the Abdomen with Prolapsus of Bowels.*—In the *Vratch*, No. 13, 1888, p. 244, Dr. P. V. Indütnyi, of Berestovenka, details an instance of traumatic lesion of the abdomen, which presents more than one point of a considerable practical interest. A peasant boy, aged 13, of medium build and health, was brought (from a village ten miles from his consulting room) in a semi-comatose state, with filiform pulse, cold limbs, and inflated and tense abdomen. The latter was found to be tightly tied round with a dirty and blood-stained rag, under which a tumour, as large as the head of a two- or three-months child, was felt. The tumour proved to consist of a bundle of highly distended, 'dark red, almost purple, intestinal loops,' emerging from a linear, clean-cut wound, measuring one inch in length, and situated in the umbilical region, at two fingers' breadth from the middle line, and almost parallel to it. The prolapsed bowel measured about eighty centimètres in length, and was firmly strangulated in the wound. As the boy's relatives stated, about thirteen hours before the patient, when struggling with a playfellow of his, had fallen in such a way that the end of his home-made knife (an implement made of the pointed portion of a hay-scythe fixed in a wooden handle) had penetrated from his pocket into the belly (at the depth of about 2 inches). He had himself drawn out the knife, only a small knuckle of the intestine protruding at the time. He had been taken home in a village cart (a barbarous jolting vehicle), and under the influence of driving (a distance of $1\frac{1}{4}$ mile) and frequent vomiting, the intestinal prolapsus gradually attained the size presented in spite of some attempts at its reduction by a medical assistant. Not the slightest injury could be detected either in the intestine or in the mesentery. Having anæsthetised the boy, Dr. Indütnyi washed out the parts and the abdominal wall with a tepid 2 per cent. carbolic solution and enlarged the wound upwards for about one inch, after which the hitherto impracticable reduction of the prolapsus could be effected in a moment. A profuse, sanious, odourless fluid with flocculi began now to escape from the abdominal

cavity on the slightest pressure. Having removed the fluid as far as possible, and thoroughly washed out the peritoneal cavity with the carbolic solution, the writer inserted a drainage tube in the lower angle of the wound and closed the remaining part with seven silk sutures. The whole procedure, including the applying of an antiseptic dressing, took about 1½ hours. For a few following days prostration, frequent sickness, abdominal pain, and distension, as well as febrile movements, were present; the highest (evening) reading amounted to 39°·5 C. (on the fifth day after the operation). On the fifth day the drainage, and on the tenth the sutures, were removed; on the eleventh the temperature and pulse returned to the normal condition. There was some superficial (cutaneous) suppuration, but, on the whole, the wound rapidly filled up by healthy granulations, and on the 29th day the boy was discharged in excellent condition. Dr. Indütnyi is naturally delighted with so satisfactory a termination of his case under such unpromising circumstances as a 13-hours strangulation of a considerable portion of the intestine, a prolonged contact of the prolapsed parts with a dirty rag, and a fully developed general peritonitis. The writer ascribes the boy's recovery to his cleansing the peritoneal cavity, and especially to his establishing free drainage. He also regards the fact that both the intestine and mesentery had escaped any injury as a very remarkable feature of the case. V. IDELSON, M.D.

674. *Spaeth on the Treatment of Indolent Ulcers by Multiple Incisions.*—In the *Practitioner*, May 1888, p. 332, Dr. Spaeth describes the following method of treating indolent ulcers. The entire ulcer is divided lengthwise by a deep incision extending far into the healthy tissue. Cross incisions are then made through the callous tissue into the healthy at intervals of about three-quarters of an inch. The incisions must go through not only the skin but the underlying fascia; the wounds must gape widely. The bleeding, often profuse, must be stopped with tampons, and the whole wound is done up with iodoform dressings. After eight to fourteen days the dressing is changed, and the ulcer will be found to be in a much more healthy state; healthy granulations are springing up in abundance, and soon cover the whole surface of the sore, whilst the elevated edges are levelled down. This treatment is of special value in the indolent ulcerations resulting from burns, severe contusions, varicose veins, &c. Of course the ulcer must be clean, and free from sloughs, before the incisions are made, or great harm will be done instead of good. [A paper by the late Mr. Gay, *Lancet*, June 1853, p. 566, and another by Dr. Hardie, May 1884, p. 879 (vide *Medical Digest and Appendix*, sects. 172 : 6, 173 : 5), entered very fully into the practice and rationale of this mode of treatment, which is by no means novel.—*Rep.*] RICHARD NEALE, M.D.

675. *Saltzman on Extirpation of Goître.*—At a meeting of the Medical Society of Finland on June 10, 1887 (*Finska Läkaresällskapets Handlingar*, No. 10, 1887), Dr. Saltzman describes two cases of extirpation of goîtrous tumours. The first was a tumour of four years' growth in a young man of 19. Though only the right lobe was affected, it had commenced to impede the respiration. The diseased half of the gland was extirpated. The other case was that of a woman, 30 years of age. The degeneration was in the right lobe, and was commencing in the left. The whole right lobe and a portion of the left was removed. The tumour weighed 360 grammes. In both cases healing took place without any bad consequences. In operating for goître Dr. Saltzman recommends that a portion of the thyroid should always be left, even when the whole gland is diseased.

W. W. IRELAND, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

676. BRADFORD.—On Salol in the Treatment of Acute Rheumatism. (*Lancet*, June 18'8, p. 1072.)

677. SUCKLING.—On Saline Purgatives in the Treatment of Typhlitis and Peritonitis. (*Brit. Med. Jour.*, May 1888.)

678. RICHARDSON.—On Atropa Mandragora. (*Asclepiad*, May 1888.)

679. RICHARDSON.—On Methylal and its Use in Delirium Tremens. (*Asclepiad*, May 1888.)

680. MACVIE.—On Sulphonal as a Soporific. (*Med. Press and Circular*, June 1888.)

681. LITTLE.—On the Relief of Migrainous Headache. (*Dublin Jour. of Med. Science*, June 1888.)

682. LITTLE.—On the Power of Saccharin in Preventing Ammoniacal Changes in Urine in Chronic Cystitis. (*Dublin Jour. of Med. Science*, June 1888.)

683. A New (?) Treatment for Hepatic Colic. (*Therapeutic Gazette*, May 1888.)

684. GREENE.—On some of the Disadvantages of Cascara Sagrada. (*Practitioner*, June 1888.)

685. VALDERRAMA, SILVA.—On the Use of Pilocarpin in Diphtheria. (*Deutsche med. Zeitung*, No. 50, 1888.)

686. MARTINI.—On Iodol. (Supplemento *Alla Gazzetta Degli Ospitali*, December 1887.)

687. GRETCHINSKY, DR. V. P.—Radix Quillaiæ as a Remedy for Nasal Catarrhs. (*Ejenedelnaia Klinitcheskaia Gazeta*, No. 8, 1888, p. 144.)

688. AUCLERT, DR.—On the Physiological and Therapeutical Effects of Dinitrate of Chrysaniline. (*Bull. Gén. de Thérap.*, June 15, 1888.)

689. HUCHARD, M.—On Chloride of Methyl Spray in Chorea, &c. (*Bulletin Médical*, July 1, 1888.)

690. DEBOVE, DR.—On the Treatment of Chronic Diarrhœa by Talc. (*Bulletin Médical*, June 10, 1888.)

691. MISRACHI AND RIFAT, DRS.—On the Clinical and Therapeutical Properties of Phenacetine. (*Bull. Gén. de Thérap.*, June 15, 1888.)

692. CHUCHE ET DESGREZ, MM.—On the Alleged Incompatibility of Iodide and Chlorate of Potassium. (*Rev. Gén. de Clin et de Thérap.*, June 21, 1888.)

693. DUJARDIN-BEAUMETZ, DR.—On Aëropathy. (*Bull. Gén. de Thérap.*, April 15, 1888.)

694. DUJARDIN-BEAUMETZ, DR.—On the Action of Drugs at a Distance. (*Bull. Gén. de Thérap.*, March 30, 1888.)

695. CHAUVIN AND JORISENNE.—On Iodoform as a Hæmostatic.

696. PIERRON.—On Broncho-pulmonary Fumigation.

697. VERGELY.—On Complications of Phthisis.

698. DELIGNY, DR.—On Infantile Urticaria.

699. Soft Soap for Dental Purposes.

700. NEVERDIN, PROF.—On Antiseptic Soap.

701. LAMBERT.—On the Treatment of Scabies.

702. GRANDMONT, DR.—On Ciliary Blepharitis.

703. On Constipation in Women.

ART. 676. *Bradford on Salol in the Treatment of Acute Rheumatism.*—In the *Lancet*, June 1888, p. 1072, Mr. Bradford contributes an article on the value of salol in acute rheumatism. The notes are based

upon sixteen cases, in which the drug was tried by the author under the direction of Dr. Ringer. As an antipyretic salol is decidedly efficacious, if given in doses of about ten grains every hour to an adult; it is not so reliable, however, as salicylate of soda. It is decidedly inferior to salicylate of soda in relieving the joint pains, and cases are liable to relapse if the drug be not continued for at least ten days after the fever has subsided, just in the same way as cases treated by salicylate of soda often suffer from a relapse if the drug be discontinued too soon. Where salol is superior to salicylate of soda is that it does not produce deafness or noises in the head so often as the latter does. This is probably due to the fact that there is less salicylic acid in salol than there is in salicylate of soda. Salol is a compound of salicylic acid and phenyl, and contains about 36 per cent. of phenyl. The taste is not so disagreeable, but, as a rule, salol will be found to be inferior in acute rheumatism to salicylate of soda.

677. *Suckling on Saline Purgatives in the Treatment of Typhlitis and Peritonitis.*—In the *Brit. Med. Jour.*, May 1888, p. 1112, Dr. Suckling draws attention to the value of saline purgatives in the treatment of peritonitis and typhlitis. At a recent meeting of the Midland Medical Society the author showed a patient who had recovered from an undoubted attack of acute peritonitis secondary to typhlitis. In this case opium and belladonna failed to give relief, while the administration of sulphate of magnesium and sulphate of sodium in half-drachm doses with ten minims of tincture of belladonna every four hours was quickly followed by improvement, the motions, at first liquid, becoming more and more solid till normal stools were passed. In another case the author treated a patient suffering from severe typhlitis with the same mixture with great relief, but after a week the bowels failed to act and all the signs of peritonitis were present. The patient was very prostrate, having been allowed only a pint of peptonised milk and a pint of beef-tea a day; he was given three ounces of whisky, and the next morning he passed an enormous liquid motion containing scybala. The stimulant was continued and another pint of milk was allowed daily. The patient continued to pass large motions with scybala, and the signs of fluid in the peritoneal cavity soon disappeared. In cases of typhlitis or peritonitis due to fæcal retention, saline purgatives are of great value if enemata fail to act. In moderate doses they do not cause peristalsis, and are exceedingly useful in washing away scybala. Should any accumulation of fluid be detected in the abdomen stimulants should be given. (Mr. Lawson Tait asserts that saline purgatives are more useful in preventing peritonitis after ovariotomy than antiseptics.)

678. *Richardson on Atropa Mandragora.*—In the *Asclepiad*, May 1888, p. 175, Dr. B. W. Richardson contributes an article on his experimental research on the therapeutic value of atropa mandragora, commonly called mandrake. The author obtained a specimen of the root, then cut it up in small pieces and tried to make an extract with strong alcohol. This was found inert, as the active principle of mandragora is most soluble in water, in the same way as the active principle of atropa belladonna. Next he made a weak tincture, using only one-sixth of alcohol, and letting the root, in fine powder, macerate for four weeks. The product in this case was found to possess the most active properties. When administered either by the mouth or by subcutaneous injection, the effects produced were those of narcotism, dilatation of the pupil, paralysis of motion and sensation, excitement during the stage of recovery, if the dose were not fatal, and sleep and paralysis if the dose were too potent. This action was found to extend to all classes of animals. The influence upon the human subject was well marked. When the tincture was applied to the tongue it produced a sensation of numbness, which lasted for several minutes. It communicated also a singular taste and sensation of numbness, which lasted for several days. In doses not sufficient to produce actual narcotism, there followed a desire for sleep, a sense of fulness in the vessels of the head, a peculiarly enlarged and confused vision, an exaggeration of sounds and noises, an inaction of the bowels, with white hard fæces when the bowels were made to act, and a singular restless and nervous excitability, closely akin to hysteria. The wine of mandragora is a general anæsthetic of the most potent quality, which no doubt depends on the presence of an alkaloid which resembles atropine very closely, if it be not identical. In olden times it was used to deaden the pain of surgical operations, with little risk to life. It has also a powerful benumbing local action, which lasts half an hour or more, and it is probable that in mandragora we have a good local anæsthetic, which, with all our advances, is still a desideratum.

679. *Richardson on Methylal and its Use in Delirium Tremens.*—In the *Asclepiad*, May 1888, p. 134, Dr. B. W. Richardson states that methylal is not really a new drug, because he introduced it himself in 1868. Its medicinal qualities are:—1. It is hypnotic and antispasmodic. 2. Its action lies between ethylic alcohol and ethylic ether. 3. It can be administered by inhalation, by hypodermic injection, and by the mouth in aqueous solution. 4. It reduces arterial tension, and by local action excites glandular activity. 5. The sleep it induces is not profound unless the dose be excessive. It is quickly eliminated, and leaves no serious effects. It causes no vomiting nor stomachic disturbance. 6. It combines with ether, alcohol, amyl nitrite, and many other remedies, with which it acts in concert, while it equalises their action by reason of its own solubility. 7. It promises to yield a safe and effective anæsthetic mixture in combination with ether. As a therapeutic agent, the author has often prescribed methylal in doses of one to four drachms in the treatment of spasmodic and painful affections, such as asthma, angina pectoris, colic, and tetanus. Recently methylal has been brought forward as a substitute for alcohol in the treatment of delirium tremens. In this way it is used hypodermically, and is said to act favourably as an anodyne and hypnotic. This drug, if required perfectly pure, is very expensive; that generally sold in the market at a low price is very inferior in quality, and contains acetone in free quantities, and the results obtained from its use are very different from those Dr. Richardson observed in his experiments.

680. *Macvie on Sulphonal as a Soporific.*—In the *Med. Press and Circular*, June 1888, p. 606, Dr. Macvie testifies to the value of sulphonal as a soporific. This new hypnotic is an oxydised product of an ethyl and acetone compound ($C_7H_{16}SO_2$). It crystallises in large and small plates, which are odourless and tasteless. They can be dissolved in 18 to 20 parts of boiling water, but require 100

parts to dissolve them in a moderate temperature; they dissolve readily in alcohol, as well as alcoholic ether. In robust people the dose is from 2 to 3 grammes, which produce at first, in a large number of cases, a feeling of fatigue and languor, with a distinct loss of sensation to all outward impressions. After an hour has elapsed a deep sleep comes on, though in several cases the period of sleep was longer delayed, while the sleep increased in intensity for several hours. In some instances it was given to big healthy men in 3-gramme doses without any effect being produced. Cases of insomnia arising out of acute affections, as fever, were relieved by a dose of 1 or 2 grammes (in females it is best to begin by giving 1 gramme). The patients generally slept from six to eight hours, and awoke refreshed, free from pain or any bad effect. It does not disturb the digestive organs, and its constant use does not exhaust the body in any way even after its use for many weeks. One single dose of 2 to 3 grammes usually produces a wonderful effect in tranquillising a disturbed patient; by a long use of the drug it is not necessary to increase the dose. It does not disturb the heart's action or alter the rate of respiration, and in this property it compares very favourably with the action of other soporifics. In cases of maniacal delirium it has proved of great service, as there is little need of anxiety to the attendant when once the patient is asleep, for he is almost sure to awake refreshed and quieter, though a large dose may have been given.

681. *Little on the Relief of Migrainous Headache.*—In the *Dublin Jour. of Med. Science*, June 1888, p. 489, Dr. James Little states that up to October 1885 he did not know of any treatment which had any distinct power of cutting short or even mitigating an attack of migraine. For the last two years the author has been in the habit of directing the patient, when he awakes with any feeling of headache, to take 20 grains of salicylate of soda in a wineglassful of water, made effervescent by the addition of a dessert-spoonful of granular citrate of caffein, and, if necessary, to repeat the dose in two or three hours. The citrate of caffein alone does not produce the same effect, but mixed with the salicylate it forms a pleasant drink, and renders its action more useful. As a rule this treatment does not lose its effect, as patients have found it just as efficacious after constant use for two years. In one solitary instance a patient stated that the attacks were kept off for a time, but when it did come it was far more severe than ever. A further trial of this treatment is necessary, and the author would be glad to hear if others have met with the same success that he has seen from its use.

682. *Little on the Power of Saccharin in Preventing Ammoniacal Changes in Urine in Chronic Cystitis.*—In the *Dublin Jour. of Med. Science*, June 1888, p. 493, Dr. James Little relates the case of an old lady who suffered for years from chronic cystitis. The urine always threw down a copious purulent sediment, and, except when decomposition was prevented by treatment, was always ammoniacal. Quinine and boric acid, when taken in fair doses, always purified the urine, but at length the stomach became so irritable that these drugs could no longer be borne, and washing out the bladder could not be performed, as the passage of a catheter caused such excessive pain. The consequence was that the urine became so offensive that no one could stay long in the room. Dr. Little then tried saccharin; he ordered six of the tabloids to be given daily. In three or four days the urine was no longer offensive, and never became so again, though there was scarcely any diminution in the quantity of contained pus. In four cases of chronic cystitis in males, the use of saccharin also proved of great value, but in all it was combined with the daily use of a catheter, so as to prevent the accumulation of residual urine.

683. *A New (?) Treatment for Hepatic Colic.*—In the *Therapeutic Gazette*, May 1888, p. 338, a so-called novel method for the treatment of hepatic colic is described as follows:—To twenty-four table-spoonfuls of hot water, add two large table-spoonfuls of pure olive oil, divide into two parts and take one when in pain, then in fifteen minutes take the remainder. The patient must then lie on his right side for a few hours, until the pain has gone, and it will be found that the gall-stone has passed; should a relapse occur the dose must be given again. This remedy was communicated to a physician of New Orleans by the blacksmith of his village when the former was suffering from a severe attack of hepatic colic. The remedy proved so successful that he was determined to publish his personal experiences. It has been published in the *Archives Roumaines* of Paris, and also in the *Medicinisch-Chirurgische Rundschau.* [This mode of treatment is far from novel, as a glance at sect. 984: 6 of the *Medical Digest and Appendix* will show. In 1880 it was brought forward by Dr. Kennedy, and in 1881 Dr. Shingleton Smith stated that the treatment was fallacious, and that the masses found in the fæces after taking the oil were not gall-stones, but the oil itself in an altered form. Subsequent observers have attached value to the remedy.—*Rep.*]

684. *Greene on Some of the Disadvantages of Cascara Sagrada.*—In the *Practitioner*, June 1888, p. 435, Mr. Greene writes that Messrs. Parke, Davis, and Co. have succeeded in producing a preparation of cascara sagrada in the form of a tasteless liquid extract. This preparation they name 'the formula for 1887,' and owes its freedom from the disagreeable taste of former preparations to the non-production of a ferment which was found to act upon a glucoside principle contained in the bark, which was split up into glucose and a vegetable acid. The author finds this new preparation quite equal to the older ones in therapeutic activity. Several cases are recorded in which patients could not tolerate cascara on account of its tendency to produce vomiting and even griping, but when the new formula for 1887 was substituted no complaints were made, and the result was always satisfactory. This tasteless extract can be readily obtained from Messrs. Burgoyne and Co., 16 Coleman Street, London.

Richard Neale, M.D.

685. *Valderrama on the Use of Pilocarpin in Diphtheria.*—Valderrama is one of the zealous adherents of Guttmann's method of treatment. Of his many cases of successful treatment with pilocarpin he records three very minutely, and certainly makes a very strong case. His views regarding the therapeutical properties of the drug are as follows:—1. Pilocarpin is for diphtheria an excellent remedy, the effect of which no one who has observed it doubts. (Query by *Deutsche med. Zeitung* reporter.) 2. In no cases of diphtheria, in which the air-passages were not yet affected, has a death been recorded by the few who have used the drug. 3. By the salivation caused by the drug the inflam-

matory affections of the mouth, pharynx, tonsils, and salivary glands are relieved. 4. This profuse salivation prevents the union of the false membranes with the mucous membrane, as they are infiltrated, softened, loosened, and expelled by the drug. 5. The loosening of the false membranes may be advantageously furthered locally by disinfectants and astringents. The patient must have nourishing food and stimulants, if necessary administered by enemata. JOHN ELLIOTT.

686. *Martini on Iodol.*—The therapeutic action of iodol when administered internally has been investigated by Dr. V. Martini, working in Professor Bufalini's clinique at Siena. The author believes that this drug is of especial value in chronic bronchial and pulmonary affections, where it may be very advantageously used in the place of iodide of potassium. In consequence of its much slower elimination, its effects are more prolonged and less intense. WALTER PYE.

687. *Gretchinsky on Radix Quillaiæ in Nasal Catarrhs.*—In the *Ejenedelnaia Klinitcheskaia Gazeta*, No. 8, 1888, p. 144, Dr. V. P. Gretchinsky, of Gorodnïa, strongly recommends the quillaia root (*vide* Prof. Kobert's paper in the LONDON MEDICAL RECORD, March 1886, p. 111) as an excellent local remedy for acute and chronic catarrhal rhinitis. When a finely cut root is shaken in an open paper bag, a fine dust rises from the latter, which, on its being drawn into the nostrils by a healthy person, gives rise to a nasal mucous discharge, sneezing, and sometimes a slight cough. In patients suffering from nasal catarrh the inhalation (through the nose) causes an extremely profuse secretion, which at first is of a light brownish or yellowish colour (from the admixture of pus cells), but subsequently becomes ever lighter and more limpid, and ultimately quite colourless. After some interval the secretion becomes less, the nasal mucous membrane becomes dry, while the passability of the nasal meatus is fully restored. Renewed nasal inhalations of the quillaia dust induce again a profuse discharge, which this time remains entirely colourless throughout. There is simultaneously observed an increased secretion in the nasal part of the pharynx, the result being an eased expectoration. The following formula was employed by Dr. Gretchinsky, both in children and adults: ℞ Rad. quill. concisæ ʒss.; rad. quill. pulver. ʒj. M.D. In a paper bag. S. To shake the bag and to draw the dust from it into the nose every three or five minutes till the nasal passages have become clear and free; to repeat the procedure from three to five times in the course of the day. The results were said to be 'brilliant' in all the writer's cases, complete cure following within a day in acute catarrh, and in three or four days in inveterate chronic cases. V. IDELSON, M.D.

688. *Auclert on the Physiological and Therapeutical Effects of Dinitrate of Chrysaniline.*—The dinitrate of chrysaniline is obtained from the mother-waters of fuchsine by concentration and treating with nitrate of potassium, hence the names of 'aniline yellow,' and of 'chrysaniline,' which have been given to this base. It is very soluble in water. Physiologically its principal effect is upon the nervous system. In small doses it acts as an excitant, but in larger doses it depresses. The cord appeared to be influenced before the brain, and the medulla was the last part to be attacked. Taken internally, it dilates the pupil, but possesses no such effect when locally applied. Arterial pressure is markedly lowered, and the heart-beat is accelerated. In toxic doses death is caused by arrest of respiration long before the heart ceases to beat. Its ingestion was generally followed by nausea, vomiting, and diarrhœa. Therapeutically it is an analgesic, but is unreliable. It has given good results in hysteria and epilepsy, but the doses required invariably give rise to vomiting and diarrhœa. It is clearly contra-indicated in cases of cardiac lesion. Until means are suggested of obviating the gastric trouble to which it gives rise the drug is not likely to come into general use.

689. *Huchard on Chloride of Methyl Spray in Chorea, &c.*—Lubinscki, of Warsaw, having precognised the use of the ether spray along the spine in the treatment of chorea, M. Huchard tried the spray of chloride of methyl in the same malady. The patient improved considerably in a few hours. The case was not conclusive, because the patient was inclined to be hysterical, but he has also employed the spray in certain cases of spinal irritation, due to hyperæsthesia or anæmia of the cord. In several of these cases the results were satisfactory. He suggests that this treatment might be of service in cases of spino-medullary disease, such as exophthalmic goître.

690. *Debove on the Treatment of Chronic Diarrhœa by Talc.*—The means at present employed in the treatment of chronic diarrhœas are as inadequate as they are numerous. Dr. Debove administered talc, in an impalpable powder, as being inert and not liable to undergo changes in contact with the intestinal secretions. He has given it in doses of seven to twenty ounces daily mixed with milk. In cases of diarrhœa due to tuberculous lesions of the intestines the treatment was uniformly successful, the diarrhœa being followed by an obstinate constipation. Curiously enough, he found that while giving the powdered talc patients tolerated substances which before they had been quite unable to retain. Milk, for example, which invariably gave rise to drastic purging, was given without setting up any disagreeable feelings. He has even been able to give a pound of oil in the twenty-four hours, and thus materially contribute to the nutrition of the patient. So far he has not tried the remedy in the diarrhœa of hot climates nor in children.

691. *Misrachi and Rifat on the Clinical and Therapeutical Properties of Phenacetine.*—Phenacetine is a white crystalline powder without taste or smell. It is quite insoluble in cold and boiling water, chloroform, glycerine, and oils in general. It is soluble in acetic acid, comparatively so in alcohol (1 in 30), and rather more so in hot sulphuric ether; cold ether only takes up 1 in 200. It is insoluble in pure or dilute lactic acid at the ordinary temperature, but, if the mixture be slightly warmed, one part of phenacetine is dissolved in five parts of pure lactic acid. The addition of a certain quantity of water does not precipitate it unless the temperature falls below 33° C. (91°·4 F.). This is a fact of some importance, because, notwithstanding its apparent insolubility, phenacetine is rapidly absorbed and eliminated. According to Dr. Dujardin-Beaumetz, the urine of patients taking the drug gives the characteristic reactions of the oxy-phenols—viz., a red coloration with perchloride of iron and a green tint with sulphate of copper. The lactic acid of the stomach is favourably situated to dissolve the drug. Its rapid absorption is thus explained, as well as certain variations in its therapeutical effects which were observed. On account of its insolubility, it is

best given in powder or tabloids. The average dose of phenacetine is ten grains, but, as an antipyretic, it is best given in smaller doses frequently repeated, while as an analgesic the larger doses are preferable. Fifteen grains produced no effects whatever in a healthy person. Therapeutically, phenacetine was found to have no effect on fever of malarial origin. In five cases of pneumonia the antipyretic effect was satisfactory in all, but in one case it seemed slightly inferior to antipyrin. Similar results were obtained in eleven cases of bronchitis in children. In four cases of tuberculosis its employment gave the following results:—1. The average duration of the apyrexia was four hours. 2. It produces its maximum effect in from one to one and a half hours. 3. The effect produced during the first day's treatment is more marked than on the days following. To produce a permanent effect on the fever of tuberculous patients, eight-grain doses every four hours are required. Not the slightest inconvenience ever followed the administration of the drug. In three patients, however, its ingestion appeared to diminish the excretion of urine. As an analgesic, phenacetine gave very good results, especially in chronic cases. In two cases of lumbago, one of three years' and the other of one year's standing, in five other cases of muscular pain, and in a case of inveterate sciatica, cures were obtained, and the good result has so far been maintained. In dilatation and other neurotic conditions of the stomach, phenacetine appeared to exert a peculiarly beneficial influence, especially when the disorder was dependent on organic lesions. To sum up, phenacetine was successful in about 80 per cent. of the cases. The failures comprised a first series of cases in which it was absolutely without effect, although it had succeeded admirably in others exactly similar. A second category comprised three cases of migraine, a disease in which phenacetine appeared much inferior to antipyrin. It was noticed that when the hand was painted with the ethereal solution of phenacetine, the resulting anæsthesia was much more pronounced than when pure ether was applied, and it has since been employed with advantage in cancer of the tongue to assuage the pain.

692. *Chuche and Desgrez on the Alleged Incompatibility of Iodide and Chlorate of Potassium.*—Iodide of potassium is generally held to be incompatible with the chlorate of potassium, the iodide undergoing oxidation at the expense of the chlorate, producing iodate of potassium, a very poisonous salt. The result of a careful investigation of the subject tends to prove that the iodate is not produced under ordinary circumstances. In one set of experiments, the iodide and chlorate were brought together without the intervention of any other salt. They were put into test-tubes and warmed over a water-bath at a uniform temperature of 37° C., varying proportions being employed on different occasions. The resulting liquids were then tested with crystallised acetic acid, so as to liberate the iodine from the iodate if any were present. No trace, however, could be detected. In another series of experiments, to the same mixture was added some lactic acid, and the whole warmed as before. A faint trace of iodine was found on applying the test—about one part in eighty thousand. In order to ascertain whether the free iodine was due to the decomposition of the iodide by light, in the presence of lactic acid, or from the decomposition of an iodate by the acetic acid, a third series of experiments were undertaken, in which a solution of the iodide was mixed with lactic acid alone. The treatment was the same as before, and the results were absolutely identical. It is evident, therefore, that the free iodine was not due to the formation and decomposition of the iodate, and there is no valid reason why iodide and chlorate of potassium should not be prescribed together.

693. *Dujardin-Beaumetz on Aëropathy.*—After a historical *résumé* of the discovery and therapeutical applications of compressed air the author describes the various models at present in use, for the most part cumbersome and expensive. The principal effects of a series of baths of compressed air, at a pressure of two-fifths of an atmosphere (the strength usually employed), is a decrease in the number and an increase in the amplitude of respirations. According to Von Vivenot, this amounts to about 3·3 per cent., and may last several months. One hundred and twenty-two baths in 143 days gave an increase of pulmonary capacity equal to 25 per cent. The pulse undergoes a somewhat similar decrease. According to Georges Liebig, the consumption of oxygen increased 6 per cent. while breathing compressed air, a larger quantity of carbonic acid being excreted at the same time. There is a tendency to lose weight, but the effect of the baths on the appetite and on nutrition generally is such as to more than overcome and outweigh it. Its therapeutical effects consist then, first of all, in an augmentation of the pulmonary capacity, and it affords great relief in all cases of dyspnœa, and particularly in asthmatic dyspnœa with rapid shallow respiration. It is of no avail in the so-called *essential* asthma, nor in that due to affections of the nasal mucous membrane; but in the emphysema which results from asthma of nervous origin and from chronic bronchitis it is of signal service. It manifests an indisputable curative action in the graver cases of whooping-cough, although no explanation of the effects is forthcoming. In no class of cases is the expanding effect of the compressed air-bath more marked than in cases of pleuritic adhesions consecutive to pleurisy, where the lung is bound down and inflation mechanically prevented. By augmenting the diameters of the chest, malformations are remedied and the interference with respiration overcome. In pulmonary tuberculosis the method is more prophylactic than curative. In chlorosis the increased oxygenisation of the blood and improved nutrition materially hasten recovery. For similar reasons it has a beneficial effect in albuminuria and diabetes.

694. *Dujardin-Beaumetz on the Action of Drugs at a Distance.*—The first step taken by the commission, of which Dr. Dujardin-Beaumetz was the secretary, was to fix the limits of its researches and work. It was resolved to confine themselves to repeating the experiments of M. Luys with such precautions as were indicated. The preparation of the drugs to be employed was confided to M. Vigier, a pharmacien not comprised in the commission. This gentleman prepared sixteen tubes, ten of which contained each ten grammes of a medicinal substance in solution. They were all absolutely identical and without any distinctive mark. The six others contained substances in powder, carefully concealed from view. An empty tube was added to the number so as to permit of a control test. M. Luys was allowed to choose the subject of the ex-

periments. The woman selected having been placed in the hypnotic condition (first stage, that of hyper-excitability), M. Luys, in the first instance, used his own tubes, bearing the name of the drug, and by placing them against each side of the neck and then at some distance before the organs of special sense, elicited the action of sulphate of sparteine, essence of thyme, ipecacuanha and haschich. Three other *séances* were devoted to similar experiments with the tubes furnished by M. Vigier. The commissioners were struck with the similarity of the phenomena observed, whichever tube was employed, a result which they attributed to the limited symptomatology of the substances contained. These symptoms comprised more or less general contractions, verging on opisthotonos; emotional movements, particularly of joy or anger, terror or sadness, gaiety or satisfaction; asphyxia, apnœa, and congestion of the face and neck, especially when the tube was placed in front of the thyroid gland. The symptoms were throughout so vague that it was impossible to say, before opening the tube, what particular drug had been employed. The same drug appeared to produce different effects according as it was placed on the right or the left side. A point not less important was the marked and energetic action of the empty tube. This was attributed by M. Luys to the refraction of the tube, and he showed that by covering it with blackened paper no effects were produced. Since the other tubes presented the same refraction this explanation was not considered satisfactory. On comparing the results obtained with the contents of the tubes, no sort of relation could be traced between them, and further, the same tube produced different effects at several days' interval. The commission arrived at the conclusion that the effects produced by tubes at a distance on hypnotisable subjects, depended more upon the fantasy and recollection of the subject than upon the substance employed. They were, therefore, of the opinion that such effects were interesting neither from a therapeutic nor a medico-legal point of view.

695. *Chauvin and Jorisenne on Iodoform as an Hæmostatic.*—Messrs. Chauvin and Jorisenne find that iodoform is a powerful, reliable, and rapid hæmostatic, and succeeds in cases where ergot has failed. They give it in pills, containing 1 grain of iodoform made up with extract of gentian or cinchona. Three to five to be taken daily.

696. *Pierron on Broncho-Pulmonary Fumigation.* Place together in a vessel exposed to a moderate heat:— Eucalyptus leaves and pine tops, āā 50 grammes; rectified spirits of turpentine, 40 grammes; water, 1,000. Add water to make up for loss by evaporation, and add a tablespoonful of turpentine every two hours. If it be not practicable to have recourse to fumigations, combustible pastilles may be employed, containing myrrh or benzoin, 3 gr.; powdered charcoal of poplar wood, 60 gr.; nitrate of potassium, 20 gr.; gum tragacanth, 3 gr.; water, 9 grammes. For sixteen pastilles.

697. *Vergely on Complications of Phthisis.*—Dr. Vergely recommends the following formulæ in the treatment of various complications of phthisis. To relieve pharyngeal and laryngeal pain:—℞ syrup of morphine (Codex), 40 grammes; cherry laurel water, 25 grammes; chloroform water, 60 grammes. A teaspoonful to a tablespoonful every hour, or less often as required. When the cough is so irritating as to prevent sleep, he substitutes the following syrup:—℞ cyanide of potassium, 1-20 centigramme (1-140 grain); syrup of morphine, 100 grammes; to be taken in the same way. To improve the condition of the stomach in phthisical patients he gives—Hyposulphite of sodium, 1 gramme; syrup of codein, 20 grammes; orange-flower water, 25 grammes; peppermint water, 80 grammes. Four tablespoonfuls to be taken daily.

698. *Deligny on Infantile Urticaria.*—In infantile urticaria, Dr. Deligny recommends the inunction, every evening, of the following ointment:—℞ Chloral hydrar., pulv. camphor, pulv. gum. acaciæ, āā 4 parts; ung. simplex, 30 parts. Rub the first three substances together until liquefaction occurs, and then add the simple ointment. This combination calms the itching, allows the child to obtain sleep, and does away with the scratching which gives rise to such distressing effects in this disease. In the morning the skin should be anointed with a 1 per cent. mixture of carbolic acid in glycerine of starch.

699. *Soft Soap for Dental Purposes.*—A soft soap for dental purposes may be prepared as follows (Redier):—℞ Powdered Castile soap, 25 grammes; finely powdered pumice stone, 10 grammes; Venetian talc, 120 grammes; glycerine of starch, 20 grammes; glycerine, 20 grammes; essence of peppermint, 2 grammes; essence of cloves, 1 gramme. Warm the ingredients together over a water-bath, and add, little by little, enough distilled water to form a paste of suitable consistence.

700. *Neverdin on Antiseptic Soap.*—Professor Auguste Neverdin recommends the following formula for the manufacture of a reliable antiseptic soap:—Sweet oil of almonds, 72 parts; soda lye, 24 parts; potash lye, 12 parts; sulpho-carbolate of zinc, 2 parts; essential oil of roses, 9·5 parts.

701. *Lambert on Treatment of Scabies.*—Dr. Lambert claims to have been uniformly successful in his treatment of scabies by means of an ointment containing 30 parts of benzine in 125 of lard. This is vigorously rubbed in three or four times, each application to be followed by an alkaline bath.

702. *Grandmont on Blepharitis.*—In ciliary blepharitis Dr. Gillet de Grandmont uses a preparation containing one per cent. of the iodo-chloride of mercury in pure vaseline. To be applied morning and evening.

703. *On Constipation in Women.*—When constipation exists in women who menstruate profusely, as in rheumatic subjects, equal parts of flowers of sulphur and calcined magnesia, mixed with an equal bulk of cream of tartar will be found an excellent laxative. ALFRED S. GUBB.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

704. PRICE, DR. JOSEPH.—Typhoid Fever following Ovariotomy. (*Obstet. Gazette*, June 1888.)

705. HERGOTT, DR.—On a Case of Vesico-utero-vaginal Fistula with Mortification of the Left Ureter. (*Ann. de Gyn.*, June 1888.)

706. JEWETT, DR. C.—On Veratrum Viride in Puerperal Eclampsia. (*Arch. of Gyn.*, June 1888.)

707. BYFORD, DR. H. T.—On Two Cases of Vaginal Hysterectomy. (*Obstet. Gaz.*, June 1888.)

708. BALDY, DR.—On the Electrical Treatment of Extra-uterine Gestation. (*Obstet. Gazette*, June 1888.)

709. Salemi, Dr.—On Antipyrin as an Agalactic. (*Bull. Gén. de Thérap.*, June 30, 1888.)

710. Hulbert, Dr. G. F.—On a Case of Vaginal Extirpation of the Uterus for Carcinoma. (*Arch. of Gyn.*, June 1888.)

711. Kermisson, Dr.—On a Case of Extra-Uterine Pregnancy of Three Years' Standing. (*Ann. de Gyn.*, June 1888.)

712. Martin, Dr. W. P.—Illustrations of Bloody Discharge from the Uterus other than Normal Menstrual. (*Philadelphia Medical News*, May 1888.)

713. Spencer Wells, T., Bart., F.R.C.S.—On the Electrical Treatment of Disease of the Uterus. (*New York Medical Record*, June 1888.)

Art. 704. *Price on Typhoid Fever following Ovariotomy.*—Patient was admitted into the Gynecean Hospital at Philadelphia on Feb. 11, 1888, for the removal of the uterine appendages on the right side. The tube and ovary were firmly adherent to and under the fundus uteri. The ovary was enlarged and cystic. The removal was not difficult, and was completed in twenty minutes. The left appendages had already been removed two years previously. During the first nine days after the operation the patient's temperature remained above normal, 98°·6 to 100°·1 F., and she complained of headache and depression. On the evening of the ninth day the temperature ran up to 102°, and she had a slight rigor. From that time she presented a typical case of typhoid fever, including the characteristic temperature record, stools, and eruption. The nervous symptoms were not particularly marked. The temperature varied from 99° to 104°·8 for four weeks. The patient made an excellent recovery. The points of interest in this case were: First, that the patient was probably in the early stage of typhoid fever when she entered the hospital, there having been no cases of typhoid in or near the hospital at the time. Second, the operation did not seem to influence the course of the fever, nor the fever the result of the operation. The temperature, combined with the early constipation and meteorism, were naturally attributed to the operation and treated accordingly, until the diagnosis of typhoid fever was made, after which the usual expectant treatment for that disease was pursued.

705. *Hergott on a Case of Vesico-utero-vaginal Fistula with Mortification of the Left Ureter.*—G. T., at her second confinement, was delivered with the forceps after a long and tedious labour. Twelve hours later she became unable to retain her urine in any position. She remained in bed four weeks, and was feeble and ill for much longer. She was told by several doctors that her condition was incurable, but went to Nancy on May 3, 1886. She was found to have a vesico-vaginal fistula, but its extent could not be ascertained owing to erythema, œdema, excoriations, and calcareous concretions. She was injected twice a day with hot water, together with a warm hip-bath every night. Under this treatment the local condition rapidly improved. It was then seen that there was considerable loss of substance in the anterior vaginal wall, oval in shape, and measuring 4 centimètres in length by 25 millimètres in width, extending right up to the cervix. Through the opening protruded the mucous membrane of the junction of the bladder, adherent to the cicatrix on the left side. The left ureter was mortified to the level of the cervix, and the condition of the other could not be ascertained. The extremity of the left ureter was embodied in the cicatrix. On July 3, the parts having been anæsthetised with cocaine, the stump of the left ureter was freed and turned back into the bladder, and, after a good deal of trouble, the edges of the fistula were pared and brought together. The patient did well, and in spite of a slight reopening, necessitating a subsequent small operation, success was complete, and she was able to leave the hospital cured in August.

706. *Jewett on Veratrum Viride in Puerperal Eclampsia.*—Veratrum viride acts by depressing the heart's action and relieving arterial tension. In eclampsia it acts on the vaso-motors and paralyses them. It is also a spinal motor depressant. The fluid extract, made from the rhizome of the plant, should be used, in doses of from ten to twenty minims, and the patient should be kept in the recumbent position during treatment. It was noticed that no convulsions occurred when the pulse-rate had been reduced to one-half. Dr. Jewett has used the preparation in twenty-three cases, sixteen of which were primipara. Three deaths occurred from the convulsions and three from other causes. Veratrum never failed to arrest the convulsions when given early. No dangerous symptom was at any time observed. Chloroform should be given until the effect of the drug is manifest and labour should be expedited.

707. *Byford on Two Cases of Vaginal Hysterectomy.*—The first, a uterus, the size of an orange with the cervix hanging to it like a thickened stem, was a case of fibro-sarcoma. The entire organ was involved, except a superficial layer of muscular tissue and peritoneum, and was ulcerated within so that the cavity was converted into an abscess. The patient was 47 years of age and had two children. The uterus, having been cut loose, was delivered with great difficulty and tore away some of the ligatures. Two compression forceps were used to secure the bleeding points and were left on for twenty-four hours. The patient made a perfect recovery. The other specimen was the size of a man's fist. It was an adenoma of the fundus and posterior wall, which had undergone cancerous degeneration. On account of the size of the uterus he found it necessary to retrovert it to get at the broad ligament. A rapid recovery ensued.

708. *Baldy on the Electrical Treatment of Extra-uterine Gestation.*—Dr. Baldy regretted that the majority of American surgeons favoured the electrical treatment of extra-uterine gestations. Of course after rupture had taken place there was but one treatment, that of abdominal section. The treatment by electricity presents some advantages. It will undoubtedly kill the fœtus, and it does away with the objection of the so-called mutilation of the woman, as it also does away with the worry and excitement of an operation. There are, however, disadvantages which cannot be overlooked. There are cases on record in which the fœtus has ulcerated its way out. Dr. Mann states that there are only two such cases on record, and that, as the number are so few, they need attach no great importance to them, but, if these two cases are compared with the total number of cases of extra-uterine pregnancy treated in this way, and reported within the last few years, the proportion is decidedly large. There have been four cases reported of rupture of a vessel without rupture of the cyst. In one case, that of Dr. Janvein's, the vessel ruptured some days after the fœtus had been killed by electricity, and the

patient lost her life. That was a positive danger, and one which could not be ignored. As far as he knew, there had never been a death which could be attributed to the knife. A number had died after the operation, but they had died in consequence of the rupture and not from the operation. The fact that the fœtus had been killed (assuming for the sake of argument that this really took place) did not render the tube pervious, but leaves the woman sterile from that side as effectually as if it had been removed by the knife and ligature. Dr. Lusk had reported two cases, in one of which, after six years, there was a mass still remaining as large as a pigeon's egg, and in the other, after four years, the tumour is as large as a hazel-nut. This was the usual history of these cases. He was in favour of removing any pathological growth whatever from any portion of the body at any time if it can be done without risk to life. The masses which were allowed to remain were as likely to set up subsequent trouble as some of the tubal and ovarian troubles for which they operated every day. It seemed to him that the gentlemen who accept the knife for the least dangerous, and refuse it for the more dangerous, troubles are extremely inconsistent, to say the least of it. By operation the cyst is removed, the fear of subsequent danger is done away with, and the risk of the continued growth of the placenta, however small that risk may be, is also avoided.

709. *Salemi on Antipyrin as an Agalactic.*—Dr. Salemi, being called to a young robust woman, recently delivered of her first child, found it necessary to arrest the secretion of milk in consequence of the condition of the breasts. During ten days he tried all the usual means—purgations, diet, iodide of potassium, &c.—without effect. He then resorted to antipyrin, of which he gave 10 grains daily, in three doses. The secretion diminished on the first day, and definitively disappeared on the third.

710. *Hulbert on a Case of Vaginal Extirpation of the Uterus for Carcinoma.*—Mrs. H., married nine years, 42 years of age, the mother of seven children, was first recognised to be suffering from malignant disease on Jan. 24, 1888. The mobility of the uterus was slightly limited, the fundus being free from all adhesions. On the posterior part of the cervix there was a mass as large as a goose-egg which occupied the entire extent of the posterior surface of the cervix to its junction with the vagina. The cervix was lacerated on both sides. The left broad ligament was thickened, infiltrated, and somewhat sensitive, in the lower part, close to the cervix. All other parts of the uterus and vagina were healthy. The patient consented to removal of the uterus, the growth having been ascertained, in the meantime, to be an epithelioma. The operation was done on Feb. 23, and lasted an hour and a quarter. The operation comprised opening up Douglas's pouch and uniting the peritoneal and mucous surface with a continuous catgut suture. The lower halves of the broad ligament were ligated and the uterus separated from the bladder, in front, the mucous and peritoneal surfaces being joined. The tissues were then divided by scissors up to the level of the lateral ligaments, and the appendages and uterus removed. A Martin's drainage-tube was inserted and the vagina was stuffed with iodoform wool. The patient progressed as satisfactorily as possible without fever or inflammation. The question of recurrence, of course, remains open.

711. *Kermisson on a Case of Extra-Uterine Pregnancy of Three Years' Standing.*—The patient, 32 years of age, became pregnant in the beginning of April 1884. In June she had a sudden and profuse attack of hæmorrhage after a violent emotion, and was seized with abdominal pain and vomiting. The hæmorrhage continued until July. On August 8 she perceived the movements of the fœtus, which ceased soon after. In January 1885 the breast began to secrete milk. In the beginning of May menstruation returned, and the milk secretion ceased. In December 1886 another violent attack of pain, with symptoms of peritonitis, occurred, followed by a period of calm. In March 1888 a tumour could be felt, occupying all the sub-umbilical region, especially on the right side, and extending two fingers' breadth above the umbilicus. It was of an oval shape, with two projections, one on the right and the other on the left side. The tumour was least hard at the summit corresponding to the seat of the sharpest pain. Notwithstanding its induration the percussion note was tympanitic below, especially to the left. The cervix was normal and the uterus, slightly pushed to the left by the tumour, remained mobile. The abdomen was opened on August 17, 1888. The fœtal cyst contained, in addition to the fœtus, a quantity of gas and sanious pus. The macerated fœtus was removed in fragments. The cavity was carefully cleansed, and two large drainage-tubes inserted. On the ninth day the discharge was seen to be stained with fæces, but recovery was not retarded, and on Jan. 5 she was able to leave the hospital, the only trace of the operation being a small fistula which gave passage to small quantities of fæces. ALFRED S. GUBB.

712. *Martin on Illustrations of Bloody Discharge from the Uterus other than Normal Menstrual.*—Attention is drawn to the importance of always making a physical examination, because similar symptoms may be caused by a variety of causes. Six cases are given, occurring about the climacteric, each due to a different cause. These were found to be climacteric metrorrhagia, epithelioma of cervix, sarcoma, double ovarian tumour, two of fibroid tumour. In younger women the same statement holds good, and eight cases are given where the hæmorrhage was due to the following variety of causes—viz., fungous endometritis, varicose tumour of labum, laceration of cervix, retro-uterine hæmatocele.

713. *Spencer Wells on the Electrical Treatment of Disease of the Uterus.*—A short review is given of the work of previous experimenters in this field. The author then goes on to describe his visit to Paris, where he was an eye-witness to the beneficial results produced in Apostoli's clinic. After describing the method of application with its limitations, he discusses the question of surgical measures *v.* electricity. Even if the tumour be growing but not advanced beyond the limits of reasonable surgical interference, Sir Spencer pronounces as follows :—'In my opinion, with the option before her, it would be neither wise nor charitable to give a patient strong advice in favour of an immediate cutting operation.' The attitude taken up by so great an authority as the author, who has had personal experience of the efficacy of electricity, forms a refreshing contrast to the bigoted and dogmatic assertions of several surgeons, who without any personal experience of this treatment, and with-

out waiting even for results from others, have not hesitated to condemn the procedure.

J. Inglis Parsons, M.D.

PATHOLOGY.

RECENT PAPERS.

714. Sutton.—On an Odontome in a Goat. On a Remarkable Case of Odontomes in a Jhar (Himalayan Goat). (Reprinted from *Trans. Odontol. Soc.*, February 1888.)

715. Rocher.—On a Tubercular Tumour of the Heart. (*Tumeur tuberculeuse du cœur. Bull. de la Soc. Anat. de Paris*, 1887, p. 50.)

716. Klumpke.—On a Case of Cyanosis with Malformations. (*Bull de la Soc. Anat. de Paris*, 1887, p. 72.)

717. Chatellier.—On Nasal Lesions in Hay Fever. (*Des lésions histologiques de la muquese nasale dans le hay fever. Bull. de la Soc. Anat. de Paris*, 1887, p. 155.)

718. Broca.—On Hare-lip and Cleft Palate. (*Sur le siège exact de la fissure alvéolaire dans le bec-de-lièvre complexe de la lèvre supérieure, &c. Bull. de la Soc. Anat. de Paris*, 1887, p. 255.)

719. Broca.—On a Basi-cranial Teratoma. (*Bec-de-lièvre médian complexe de la lèvre supérieure causé par une tumeur de la base du crâne. Bull. de la Soc. Anat. de Paris*, 1887, p. 395.)

720. Windle, B. C.—On a Teratoma in a Calf. Account of a Teratoma springing from the Sphenoid of a Calf, &c. (*Jour. of Anat. and Phys.*, vol. xxii., part 3, p. 423.)

721. Guillet.—On a Case of Sarcomatous Kidney in a Child. (*Sarcome du rein droit chez un enfant de neuf mois. Bull. de la Soc. Anat. de Paris*, 1887, p. 777.)

722. Arthaud and Butte.—On the Pathogeny of Diabetes (*Recherches sur la pathogénie du diabète, &c. Arch. de Phys. Norm. et Path.*, 1888, No. 3, p. 344.)

723. Prokofïeva, Dr. Olga V.—Case of Hæmorrhagic Infarct in Uterine Fibromyoma. (*Vratch*, No. 9, 1888, p. 164.)

724. Bonandi.—On Spina Bifida as a Cause of Perforating Ulcer (*Della Spina Bifida Come Causa del Mal Perforante*). (*Gazzetta Degli Ospitali*, Marzo 21, 1888.)

725. Muir.—On a Case of Spontaneous Rupture of the Heart. (*Glasgow Med. Jour.*, May 1888.)

726. Timgren, Dr.—A Case of Brain Tumour. (*Finska Läkaresällskapets Handlingar*, No. 5, 1887.)

727. Cimbali.—On Primary Atrophy of the Kidneys (Interstitial Nephritis) and Atrophic Cirrhosis of the Liver. (*Lo Sperimentale*, March 1888.)

Art. 714. *Sutton on an Odontome in a Goat.*—The upper molars of both sides were defective. Each antrum contained a cyst with dense thick walls. The outer shell was of bone, lined with thick fibrous tissue. The interior was occupied by denticles, fragments of cementum, and bone of varying shapes and sizes, amounting to nearly three hundred.

715. *Rocher on a Tubercular Tumour of the Heart.*—The specimen was taken from the body of a soldier, aged 22, who died suddenly. The pericardium was completely adherent. Between it and the heart there was a caseous mass at one point. A similar mass as large as a large nut was found in the wall of the right auricle, separated from the interior only by the endocardium. A caseous lymphatic gland was also found. The lungs and other viscera were normal.

716. *Klumpke on a Case of Cyanosis with Malformation.*—The infant survived eleven days, being cyanosed from birth. There was transposition of the abdominal viscera and lungs. The heart was in the normal position, but its cavities were transposed. There were obliteration of trunk of pulmonary artery, persistent ductus arteriosus, and foramen ovale, a diverticulum from the left auricle, and a double perforation in the interventricular septum. The left ventricle was reduced to a canal. There was no left auriculo-ventricular opening.

717. *Chatellier on Nasal Lesions in Hay Fever.*—The author describes two cases in which the dominant lesion of the mucous membrane was the presence of myxomatous tissue. The hypertrophy of the mucous membrane was totally different from the ordinary nasal polypi. Besides these were present numerous young round elements clearly indicating the existence of a chronic inflammation. The cases were cured by the ablation of the myxomatous tissue.

718. *Broca on Hare-lip and Cleft Palate.*—In this paper, which is one of several important contributions to the question by the same author in the volume mentioned in the heading, M. Broca sums up as follows with regard to the fissure and its relation to the teeth :—1. Common complex hare-lip separates the median and lateral incisors; it opens up the nasal cavity. 2. When it is bounded by the canine and by one incisor the lateral incisor is generally absent, and the median is that which lies on the mesial side of the fissure. 3. In bilateral hare-lip the bony tubercle generally carries two incisors. When it bears four, the two lateral are often supplementary, the precanine incisor existing on the external border of the fissure. 4. It is also possible that some cases where the fissure passes between the canine and the two incisors of that side are explained by the atrophy of the lateral incisor and the existence of a supplemental. 5. The facts are best explained by the theory that four centres form the intermaxillary bones. 6. Hare-lip may perhaps often be caused by a defect in length of the external nasal centre.

719. *Broca on a Basi-cranial Teratoma.*—The author describes an interesting case in which an epignathoid tumour was attached to the dura mater, and left the skull between the vomer on the right and the ethmoid on the left. It produced a complicated fissure of the palate and lips.

720. *Windle on a Teratoma in a Calf.*—This specimen may be mentioned in connection with the foregoing, which it resembles. An epignathoid teratoma springing from the sphenoid projected into the mouth of the calf, and was attached to its floor. It caused cleft palate, cleft tongue, and failure of union of the two halves of the inferior maxilla.

721. *Guillet on a Case of Sarcomatous Kidney in a Child.*—An enlargement of the abdomen was noticed at the third week, and at the same time there was continuous vomiting for eight days. The tumour measured 20 × 16 × 6 centimètres. No trace of kidney could be discovered by the naked eye. Microscopically traces of renal tissue were observed under the capsule; still more deeply lay the tumour, which consisted of a spindle-celled sarcoma with many hæmorrhagic foci.

722. *Arthaud and Butte on the Pathogeny of Diabetes.*—Amongst animals (dogs and rabbits) in which the right vagus was divided and the peripheral end irritated with lycopodium powder, life persisted for some time subsequently, especially amongst dogs (one lived four months). The first phenomena which appeared were slight tachycardia,

and a small alteration in the physical character of the urine, which became clear, abundant, and slightly albuminous. The quantity of urea increased little by little, but rarely doubled itself. During this first period, which lasted one or two months in the dog, there were observed as less constant phenomena polyphagia, polydipsia, and sometimes slight glycosuria. The animals gained weight, and the pulmonary functions were normal. Sometimes anorexia and vomiting occurred. In the second period polyuria and azoturia persisted or became exaggerated, the heart's action gradually became slower, emaciation took place, exhalation of CO_2 diminished, temperature remained constant, glycosuria occurred, with trophic cutaneous disorders. The animals gradually became more feeble, temperature fell, respiration assumed a type resembling Cheyne-Stokes, and death followed in the midst of convulsions. At the autopsy there was found dead-leaf colour of myocardium, congested liver, with interstitial hepatitis, and an absolutely typical interstitial nephritis, characterised by epithelial lesions, glomerular and medullary hyperæmia and proliferation of connective tissue. These alterations in the liver and kidneys are absolutely identical with those described by Professor Strauss in cases of diabetes.

723. *Prokofïeva on a Case of Hæmorrhagic Infarct in Uterine Fibromyoma.*—In the *Vratch*, No. 9, 1888, p. 164, Dr. Olga V. Prokofïeva, of Grand Duchess Elena's Clinical Institution in St. Petersburg, describes this interesting case which, she says, seems to be the first of its kind on record. A weak, emaciated, nervous unmarried woman of 34 was admitted on account of intense pelvic pain and a steadily increasing enlargement of the abdomen, which, according to her statement, had made their appearance about a twelvemonth before. The circumference of the abdomen at the umbilical level measured 90 centimètres. A tender, movable, smooth, hard, globular tumour was made out, which proved to be connected with the womb, though the latter could be easily moved in a vertical direction and had a normal size. There were present also distinct signs of a slight insufficiency of the mitral valve. The woman's menstruation was regular as regards its type and amount of blood, but invariably associated with intense backache. About six weeks after her admission she began to complain of a continuous severe pain strictly limited to a certain spot in the right upper segment of the tumour. A localised peritonitis was supposed, and, accordingly, various antiphlogistic means were employed for about a week. On the forty-ninth day (after admission) median laparotomy was performed (by Professor D. O. Ott), and a pedunculated uterine fibro-myoma, 'as big as the head of a child of five or six months,' removed without any trouble. The pedicle, which was 'fleshy' and as thick as a man's thumb, was divided into two portions, ligatured, cut through, and returned into the abdomen. Not a trace of peritonitis was seen. The abdominal incision rapidly healed through the first intention. On the twenty-first day after the operation the woman left well and strong. On examining the tumour removed its surface was found to be of a rosy colour, except an area, of the size of a tea-saucer, in the right upper segment (that is, exactly in the situation which the pain had been referred to), where there was seen a nearly circular, slightly elevated, 'cap-like' patch which was dark-red towards the periphery, paler in its centre, and separated by a dark-violet zone from the adjoining surface of the new growth. An incision carried through its centre showed that the patch involved the subjacent layers and that 'it had the shape of a segment with a somewhat irregular lower border.' The microscope proved that the patch was nothing else than a true hæmorrhagic infarctus undergoing disintegration and resorption in its central portion. Dr. Prokofïeva thinks that the infarctus was probably of an embolic origin, her patient suffering from mitral disease. Professor Ziegler, when discussing various retrogressive changes in new growths, generally, alludes to hæmorrhagic infarctus as one of those alterations. But neither Cohnheim, nor Quincke, Gerhardt, Ebstein, Juergensen—in short, none of the authorities on the subject of the infarctus, mentions a word concerning its occurrence in any neoplasms. In fact, Dr. Prokofïeva was unable to find any other similar instance, in spite of all her extensive searchings.

V. IDELSON, M.D.

724. *Bonandi on Spina Bifida as a Cause of Perforating Ulcer.*—Dr. S. Bonandi reports a case of perforating ulcer developing in an infant four years old, and the subject of a lumbar spina bifida. Except in the respect of age, the ulcer seems to have been a perfectly characteristic one, running a typical course. He regards the case as one affording grounds for the belief in the cerebral nervous origin of this condition, and refers to a similar one reported by Kermisson in *Le Bulletin Médical*, Sept. 7, 1887.

WALTER PYE.

725. *Muir on a Case of Spontaneous Rupture of the Heart.*—In the *Glasgow Med. Jour.*, May 1888, p. 378, Mr. Muir, M.B., records the case of a man, aged 35, who suddenly fell down unconscious. He was seen by the author a few minutes afterwards, and was lifted on to a bed. There was no pulse at the wrists, and only the feeblest intermittent jogging action of the heart could be detected. The apex beat could not be felt, the face was cyanotic, and the surface pallid. The respirations were 50, and the patient was quite unconscious. After administering a restorative he gradually regained consciousness, and commenced to complain of severe pain. Soon he began to scream with the pain in his back, and implored those round him to 'kill' him. Hot fomentations failed to restore the pulse, the hands and feet soon became clammy. On raising him he implored to be let down again, and continued to move about from one position to another in the greatest agony. His favourite position was a semiprone one, but later on he became very violent and expired suddenly in the arms of an attendant, exactly one hour from the onset of the attack. On *post mortem* examination, after taking out the sternum, the interpleural space was observed to be rounded and bulging, and on opening it the pericardium was found to contain about 20 ounces of thick, dark, bloody serum. On examining the heart, which was about the usual size, a thick coating of irregular masses of fat covered its surface, and in the wall of the right auricle, between the superior and inferior venæ cavæ, was a large tear, which easily admitted two fingers, and communicated with the sinus venosus. The patient's history did not reveal much. In his younger days he had been a professional runner, and lately he had been a hard drinker. He never complained of shortness of breath unless he over-exerted himself, and up to the time of the attack none of his friends thought him ill in any way.

RICHARD NEALE, M.D.

726. *Timgren on Tumours on the Medullary Substance of the Brain.*—Dr. Timgren has a description of a case of brain tumour in the *Finska Läkaresällskapets Handlingar*, No. 5, 1887. The patient, a woman of 47 years of age, who had borne five children, had been troubled with a feeling of weariness, and giddiness and fulness in the head. The pulse and temperature were normal. About seven weeks after coming under medical observation she became comatose, which was supposed to be owing to cerebral apoplexy, and soon died. In the medullary substance of the brain nine tumours were found, varying in size from a pea to that of a pigeon's egg. They were sharply defined, and could easily be separated from the brain substance. They were found to be of sarcomatous nature.

W. W. IRELAND, M.D.

727. *Cimbali on Primary Atrophy of the Kidneys (Interstitial Nephritis) and Atrophic Cirrhosis of the Liver.*—The object of this exhaustive article appears to be to call attention to the importance of hypertrophy of the heart in compensating for the vascular disturbances resulting from cirrhosis of the liver as well as from renal cirrhosis. The relation of cardiac hypertrophy to renal disease is recognised; but the sequence of cardiac hypertrophy upon hepatic cirrhosis, and the beneficial influence of the hypertrophy, have yet to be established, although we think Dr. Cimbali has gone some way towards accomplishing that end. The case upon which the argument is founded was that of a man, aged 38, who died somewhat rapidly from heart failure. He had never suffered from ascites, and yet, at the *post mortem*, in addition to hypertrophy of the heart and renal cirrhosis, very advanced hepatic atrophic cirrhosis was found. Dr. Cimbali attributed the absence of ascites to the compensatory hypertrophy of the heart, which, by promoting an increased flow of urine and a more active circulation in the abdominal parietes, caused the serous effusion into the peritoneal cavity to be absorbed as rapidly as it was poured out, and an equilibrium to be maintained. As soon as the force of the heart fails, the equilibrium is destroyed, the fluid accumulates, and ascites is produced. He lays down the following propositions. 1. Atrophic cirrhosis of the liver is histologically an incurable disease. 2. All cases of cirrhosis of the liver do not necessarily lead to ascites. 3. In some cases the fluid is reabsorbed spontaneously, and does not reaccumulate; or after one or two tappings it is not reproduced. 4. The prognosis is not necessarily unfavourable. 5. The spontaneous cure, not of the hepatic cirrhosis, but of the clinical results, is quite possible. Against these propositions we have not much to say, but most observers attribute the more or less permanent disappearance of ascites in such circumstances to the establishment of a free collateral circulation between the portal and the systemic veins, and not to the compensatory hypertrophy of the left ventricle. And further, speaking of the treatment of renal cirrhosis, he says:—Since we cannot directly influence the morbid process in the kidneys, it is necessary to direct the attention to the heart. General hygienic conditions directed against weakness of the heart, and cardiac tonics and stimulants as remedial agents in the recurring attacks of transitory heart failure, constitute the only valid treatment of chronic interstitial nephritis with consequent hypertrophy of the left ventricle.

H. HANDFORD, M.D.

PHYSIOLOGY.

RECENT PAPERS.

728. GASKELL, DR. W. H.—On the Rhythm of the Heart. *Résumé de recherches sur le rhythme et la physiologie des nerfs du cœur et sur l'anatomie et la physiologie du système nerveux.* (*Arch. de Phys. Norm. et Path.* 1888, No. 1, p. 56.)

729. DASTRE, M. A.—On the Hepatic Ferments. *Physiologie du Foie—Recherches sur les Ferments Hépatiques.* (*Arch. de Phys. Norm. et Path.*, 1888, No. 1, p. 69.)

730. DE LEON.—On Iron in Milk. *Eisengehalt der Milch.* (*Archiv für Hygiene*, vii., 1887, p. 286.)

731. SALKOWSKI.—On the Change of Saccharin in the Body. *Notiz uber die Beschaffenheit des sogenannten Saccharins und sein Verhalten in Organismus.* (Virchow's *Archiv*, Band cx., Heft 3, p. 613.)

732. GRIMM.—On Chyluria. *Ueber einen Fall von Chylurie.* (Virchow's *Archiv*, Band cxi., Heft 2, p. 341.)

733. BASINI.—On a Contribution to the Study of the Recurrent Radial Pulse. *Contributo Allo Studio del polso ricorrente radiale.* (*Giornale Internazionale delle Scienze Mediche Napoli*, Fasc. 2, 1888.)

734. VITTORIO AND ELVIDIO.—On the Local Action of Helleborine. *Sugli effetti locali della Elleboreina.* (*Gazzetta degli Ospitali*, Marzo 25, 1888.)

735. FERNI.—On Intermittent Right Radial Pulse. *Polso Radiale Destro intermittente.* (*Gazzetta degli Ospitali*, Marzo 28, 1888.)

736. LOYE AND DASTRE, DRS.—On Intravenous Injections of Salt Water. (*Bull. Gén. de Thérap.*, May 15, 1888.)

737. RICHET, M. CH.—On the Modus Operandi of Cocaine. (*Bulletin Médical*, May 13, 1888.)

738. CERSOY, DR.—On the Influence of Tobacco Smoke upon the Pneumogastric. (*Bull. Gén. de Thérap.*, May 30, 1888.)

739. KOLLER.—On Erythrophlæin. (*Wien. med. Wochensch.*, No. 6, 1888.)

740. LISSAUER, H.—Researches on the Effects of the Alkaloids of Veratrum. (*Centralbl. für die med. Wiss.*, No. 5, 1888.)

741. SEPPILLI, DR. G.—On the Blood of the Insane. (*Arch. Italiano per le Malatie Nervose*, Fasc. i. and ii., 1888.)

ART. 728. *Gaskell on the Rhythm of the Heart.*—In this paper the results of Dr. Gaskell's work on the points indicated in the heading are summarised, with the addition of some new facts. The summary is divided into three parts. i. *Rhythm of the Heart.*—(1) The rhythm of the heart is due to a rhythmic power of the muscular tissue itself and not to peripheral nerve-centres. (2) The rhythmical power of the entire heart is related not to the presence of ganglion cells, but to the persistence of a primitive condition of the cardiac muscular tube. (3) The succession of contractions is due to the peristaltic wave which sets out from the orifice where the greatest rhythmical activity exists, and it is slackened on its way from one chamber of the heart to another by the nature and anatomical disposition of the muscular tissue at the junction of its parts. ii. *Action of Cardiac Nerves.*—(1) The muscular tissue of the heart is innervated by two series of nerves of opposite characters; one group producing a metabolic and destructive change, the other a metabolic and reparative. (2) The effects of the latter nerves, which may be called anabolic, are those of inhibition, that is to say, a depression of function followed by repair. (3) The effects of

the former or catabolic nerves, are motor, that is to say, consist in an augmentation of function followed by exhaustion. iii. *Nature of Sympathetic System.*—(1) All the visceral and vascular muscles receive two nerves, of which one is anabolic (inhibitory), the other catabolic (motor). These nerves are characterised by distinctive peculiarities, anatomical and histological, as well as physiological. (2) All the central nerves are characterised by their slender, medullated fibres. (3) These lose their envelopes and become non-medullated in the different groups of ganglia, where their number is increased. (4) In different ganglionic groups the catabolic and anabolic nerves of a similar tissue lose their medullary sheath. (5) The sympathetic ganglia are endowed with the faculty of maintaining alive the peripheral nerves in connection with their nerve-cells. (6) The white communicating trunks form the only connections between the cerebro-spinal system, and that of the sympathetic. (7) These communicating branches are formed of very fine medullated fibres, and pass out of the cerebro-spinal system in three well-defined groups: (*a*) cervico-cranial; (*b*) thoracic; (*c*) sacral. (8) The limits of the issue of these branches correspond to those of the nerve-cells of Clarke's column. (9) The slender medullated fibres of the visceral nerves are in very close relationship with the motor nerves, which take origin in the cells of the lateral cornu, that is with the system of respiratory nerves of Bell, and form with the latter a thoracic or splanchnic root; so that we may consider the cranial and spinal nerves as formed by three roots: anterior, lateral, and posterior. (10) The lateral root consists of a ganglionic and a non-ganglionic portion; the ganglia of the former belong to the sympathetic system. 11. The cranial and spinal nerves are composed of two separate nervous systems, having distinct centres of origin in the cerebro-spinal axis: (*a*) a somatic nerve-system, giving origin to ganglionic or aganglionic nerve-roots which may be defined as constituting the nerves of the animal life. (*b*) a splanchnic nerve-system, giving origin to ganglionic and aganglionic roots, constituting the nerves of the organic life.

729. *Dastre on the Hepatic Ferments.*—The researches lead to a somewhat paradoxical conclusion, viz. that an invertive ferment exists in the liver whose rôle is not, *à priori*, easy to understand, and on the other hand they seem to point to the absence of a glycosic ferment, the presence of which would appear to be necessary. The question of the production of soluble ferments in the organism presents many difficulties. A secretion may be at one moment rich in some enzyme, a few minutes afterwards destitute of it. Schiff's theory of the peptogens has been devised to explain this. The presence of invertive ferment or of the inversive action is much more widely spread in the organism than is generally recognised. The author has obtained it with macerations of stomach, pancreas, and thymus. The change was rapid (two to four hours), and independent of micro-organisms apparently. It is not wonderful to find it in the liver then; indeed, it may help in a second digestion. As to the absence of a glycosic ferment, he adds:—The hepatic cells transform the indiffusible glycogen which they have stored up into sugar apparently for their needs and by a phenomenon of cellular activity. But the greater part of this diffusible and soluble substance is carried away by the blood, and is thus used for the wants of other parts. The specialisation of the liver as a sugar-producing organ lies in the exaggeration of this production. The mechanism by which the glycogen is transformed is identical with that of diastase. Only on account of the presence of the glycogen this diastase is immediately employed, the time of its production being also that of its utilisation; it is not capable of isolation, therefore, as it is in the pancreas where there is no glycogen. Also the action in the liver is a vital one, depending on the life of the cells in the pancreas it survives them, and is chemical rather than vital. This difference becomes less on examination. It is the same phenomenon in each case, but an interval exists in the latter. In the case of the liver, on account of the presence of the substance to be transformed, the interval is reduced to nothing. It is possible to imagine, however, that on account of the absence or the resistance of the glycogen it may be feasible, on some occasion, to isolate the hepatic glycosic ferment.

730. *De Leon on Iron in Milk.*—The author, by experiments conducted on Forster's method, comes to the following conclusions.

	1,000 gr. milk.	100 gr. fat-free solids.	Observations.
Human milk ...	2·54 mg. iron.	3·22 mg. iron.	16
Asses' milk	1·50 ,,	1·76 ,,	1
Cows' milk	4·04 ,,	4·35 ,,	8

According to this the amount of iron in milk in general, and especially in human milk, is very small, on the average less than in most hitherto known analyses which were influenced by accidental concentration. The amount varies within tolerably narrow limits. A fixed relation between the amount of iron and the solids or fat-free matter cannot be determined. Equally little was any increase in the amount of iron shown in a healthy woman after fourteen days' administration of one gr. per diem of ferrum lacticum.

731. *Salkowski on the Change of Saccharin in the Body.*—In an earlier research the author found that saccharin, obtained by recrystallisation out of hot water from the urine of animals examined, left a portion soluble with difficulty, which had no longer a sweet taste, and by the determination of sulphur and nitrogen did not appear to be the anhydride of sulphaminbenzoic acid, but the acid itself. Further observations have shown that this view was correct. Before experimenting with animals to determine the cause of this, saccharin was treated in a manner similar to that obtained from the urine. The result was that by a simple recrystallisation the greater part of the saccharin was changed into a substance without sweet taste, identical with that in the urine. Out of 9 grains saccharin 5·32 grains of this material were obtained (59 per cent.). The question was whether this was a metamorphosis, as appeared probable from the large quantity present, or whether the acid was present at first as an admixture. It has now been determined that from the bought material considerable quantities of a non-sweet acid are to be obtained, that this is parasulphamin benzoic acid, and finally that this acid does not first arise by recrystallisation, but was previously present. Besides this it contains a considerable quantity of orthosulphobenzoic acid. The appearance of the former acid in the urine is explained by its admixture with the saccharin as it passes through the animal body without alteration.

732. *Grimm on Chyluria.*—The author makes the

following amongst other observations :—1. A diet rich in fat alters the condition of the urine in an hour and a half. 2. The daily amount of fat in the urine is greater under a diet rich in fat than with one more meagre. 3. The amount of albumen in the urine undergoes no noticeable alteration under an increase in fat in the diet if the other nourishment is about equal. 4. The components of the fat excreted in the urine alter their quantitative proportions. The amount of oleic acid may differ by as much as 50 per cent. 5. The fats contain only a small quantity of volatile fatty acids. These are increased through increase in their amount in the diet. 6. Certain heterogeneous fats, such as cetyl alcohol, appear again in the urine if taken into the alimentary canal. BERTRAM C. A. WINDLE, M.D.

733. *Basini on a Contribution to the Study of the Recurrent Radial Pulse.*—Dr. Basini contributes an elaborate paper upon the formation and character of this phenomenon (first described by Jaccoud in 1875), as studied by means of the sphygmograph, in people of ordinary health and in various forms of illness. The sphygmograph employed was Marey's (although it is noted that the writer states he would have preferred Dudgeon's instrument, had it been available), and the proximal side of the radial vessel was compressed by a special form of spring-pressure forceps, exercising a force of a kilogramme. The general results of Dr. Basini's investigations are as follows: In health the recurrent radial pulse is always present, and generally appears between four to six seconds after the direct radial current has been arrested. This interval varies with the elasticity and tonic condition of the vessels, and is not dependent upon the force of the heart's contraction. In cases of chronic disease the recurrent pulse is retarded in its formation, as much as thirty seconds sometimes elapsing. In atheroma this pulse is very feeble, and still later in appearing, sometimes not until two minutes after compression. It is at first very small, afterwards increasing in volume. With a very feeble general circulation this pulse may not appear at all. In its characters, as shown by the sphygmograph, the pulse resembles the direct one in the same individual, but is always much smaller, and the tracing is always flattened at the end of the upstroke, so that there is there presented a 'plateau.' The dicrotic wave is shown, and when the direct pulse is intermittent or irregular, so is the recurrent one. The paper is illustrated with numerous tracings.

734. *Vittorio and Elvidio on the Local Action of Helleborine.*—Working in Professor Bufalini's laboratory, Signors Vittorio and Elvidio report that helleborine in dilute solution produces complete anæsthesia of the cornea. This anæsthesia lasts longer than that produced by cocaine, and is more distinctly confined to the cornea. There is no relaxation of the lid, no dilatation of the pupil, and no alteration of intra-ocular tension. When injected beneath the skin, local anæsthesia is produced, but when thus employed it exerts a powerful toxic effect upon the heart, and should only be used with the greatest circumspection.

735. *Ferni on Intermittent Right Radial Pulse.*—Dr. C. Ferin reports a case in which this symptom was present on the right side only. At full inspiration the radial and carotid pulsations disappeared, and during inspiration they were to be felt merely; but during expiration they were equal in force and regularity to the pulsations on the left side of the body. After excluding causes such as the pressure of a new growth or an aneurismal tumour, Dr. Ferni concludes that the symptoms were due to the pressure of the apex of an emphysematous lung. WALTER PYE.

736. *Loye and Dastre on Intravenous Injections of Salt Water.*—It was found that an indefinite quantity of water containing 7 per cent. of chloride of sodium could be injected with impunity into the veins of a rabbit, provided that it was injected at a certain rate, not exceeding two grammes per minute and per kilogramme of the weight of the animal, and at a temperature of 39° or 40° C. The water is rapidly excreted by the kidneys, and the urine soon loses its yellow colour and becomes limpid. If the quantity of salt exceeds or falls below 7 per cent., a temporary glycosuria is provoked. No alteration in the blood-pressure took place during the experiments, and no kidney lesions were caused. It was suggested that the injection of this salt solution furnished a means of increasing diuresis by washing the blood.

737. *Richet on the Modus Operandi of Cocaine.*—Having undertaken the investigation of the method of production of the epileptiform convulsions which are caused by large doses of cocaine, M. Richet endeavoured to ascertain what parts of the nervous system were acted upon by the alkaloid. The 'convulsive dose' was found to be 2 centigrammes ($\frac{3}{10}$ grain) per kilogramme of weight of the animal experimented upon. When the spinal cord was severed no convulsions were produced, so that the action of the alkaloid is evidently not due to its effect on the cord. He then tried the effects of the removal of the motor areas, and found that the convulsions continued to occur, though somewhat altered in character. Moreover, the dose of the drug necessary to their production was considerably increased, not less than $\frac{2}{5}$ grain sufficing. Electrical stimulation of the motor areas beforehand sometimes increased and sometimes diminished the tendency to convulsions. He concludes that cocaine produces convulsions by acting on the entire cerebral mass, and more particularly by its action on the motor cells of the cortex.

738. *Cersoy on the Influence of Tobacco Smoke upon the Pneumogastric.*—After referring to Dr. Decaisne's communication on a case of 'smokers' vertigo,' Dr. Cersoy insists on the influence of the method of smoking in the production of this symptom. When the smoke is swallowed (inhaled?) it remains imprisoned for a period of time within the mucous membrane lining the pharynx, larynx, and trachea, and therefore is in intimate contact with the numerous ramifications of the vagus. The result is ultimately to produce a sort of paresis of these nerves, giving rise to increased rapidity of heart-beat with diminished force of contraction. This causes a cerebral anæmia more or less ephemeral in character, with its consequences, vertigo and hypothemia. Dyspnœa is by no means an uncommon symptom in cigarette smokers who swallow the smoke, due to an enfeeblement of innervation of the muscles of the glottis, whereby the glottic aperture is imperfectly dilated. The same defect of innervation is noticeable in the branches of the vagus supplying the stomach, causing atony and imperfect digestion. The gastric secretions are also diminished in quantity, and the irritation caused by the passage of undigested food into the intestines sets up various intestinal disorders. Tobacco smoke, therefore,

evidently exercises a peculiarly deleterious and toxic action on the pneumogastric nerves, which occasions a series of pathological phenomena. The treatment consists in the administration of vegetable bitters, tepid baths, abstention from, or extreme moderation in the use of, tobacco; and, above all, to avoid *swallowing* the smoke. ALFRED S. GUBB.

739. *Koller on Erythrophlæin.*—Alluding to Lewin's work on erythrophlæin, an alkaloid contained in the bark of the erythrophlæum guinense and the chief constituent of the African haya poison, Dr. Carl Koller states (*Wien. med. Wochensch.*) that its most important property is that it produces local anæsthesia, lasting in some cases as long as two days. He has tested the effect of hydrochloric erythrophlæin on the eye. Instillation of two drops of a freshly prepared 0·25 solution produced the following symptoms in a dog:—In about one minute there was rapid blinking of the eyelids, evidently caused by pain. The eye then remained convulsively closed, the conjunctiva was highly inflamed, and there was ciliary injection. In half an hour the period of irritation is past, the eye remaining open. The cornea is perfectly insensible to needle pricks for at any rate several hours. The pupil is not affected. On the following day the eye is again convulsively closed, the cornea much swollen and inflamed, the limbus corneæ prominent, and the corneal surface of a whitish dulness, so that the pupil is barely visible. In seventy-two hours this dulness has not quite disappeared. Experimenting on himself Koller found these symptoms repeated. The most interesting he considers to be the irritation and the dimming of the cornea. While a 2 per cent. solution of cocaine will cause irritation, lasting about one minute, a $\frac{1}{8}$ per cent. solution of erythrophlæin has that effect for upwards of half an hour. A correspondingly longer duration of anæsthesia is noticed—many hours to ten or fifteen minutes. This might be a source of danger to the nerves. The dimming of the corneal epithelium cannot be ascribed merely to evaporation, but must be recognised as a direct effect of the alkaloids, if the relative duration of the irritation and anæsthesia, as well as of the intensity of dimness, is taken into consideration. There seems to be a nutritive disturbance of the epithelial cells, which causes the dimness. After subcutaneous injection of an erythrophlæin solution there also follows a long period of pain, and then apparent anæsthesia of the skin. But it is difficult to prove the latter in animals, and the poison is so strong that Koller has not ventured to experiment with it in this way on the human subject. Further experiments must prove whether erythrophlæin may be used by itself, or in suitable conjunction with cocaine, to produce local anæsthesia.

JOHN ELLIOTT.

740. *Lissauer on the Veratrum Alkaloids.*—The original paper is to be found in the *Archiv für experimentale Pathologie*, xxiii., s. 36. 1. The action of crystallised veratrin (cevadin). All previous investigations have been made with amorphous veratrin, which is a mixture of a crystallised alkaloid (cevadin) and an amorphous base (veratridin). The experiments were made on frogs and rabbits chiefly. The results obtained from those on frogs confirmed in the main the conclusions of previous observers. The sudden fall in the ventricular pulsations described by Boehm (under whose guidance Lissauer worked) is ascribed to the action of cevadin upon the heart-muscle. Besides the well-known action on the muscles generally, there is also apparently a direct exciting effect on the central nervous system, a conclusion which was confirmed by experiments on warm-blooded animals. As to the effect on the circulation, Lissauer's conclusions are somewhat different from those of Berzold and Hirt, according to whom there is an absolute parallelism between the cardiac frequency and the blood-pressure. They affirm that both of these diminish after moderate, also large, doses; the pulse-frequency at first from central irritation of the vagus, and later on from the action on the automatic cardiac ganglia; the blood-pressure from the slower cardiac action, and from excitation of the depressor nerve and paralysis of the vaso-motor centre. The above connection between pulse-frequency and blood-pressure is not confirmed by Lissauer, according to whom the sinking of the blood-pressure is exclusively a consequence of a general vaso-motor paralysis, apparently of central origin, perhaps also with direct participation of the vessels in the muscles, and it has nothing to do with the depressor nerve. The frequency of the pulse, which is always much slower at first (especially after intravenous injection), gradually rises again, usually with pronounced irregularity. Finally, a regular and powerful cardiac action is established, though somewhat slower than the normal. This slower action is not influenced by section of the vagus or atropine injection, and is, therefore, apparently due to direct action of the poison on the automatic cardiac centres. The primary slowness of pulse may possibly be due, the author thinks, to central irritation of the vagus; but this is not proved with certainty. The respiration is of importance in the course of the poisoning. At first it is slower, at times interrupted, but only slightly dyspnœic. Death ensues either from its sudden stoppage, with tonic convulsions, or almost imperceptibly, from paralysis of the respiratory centre. The animal seemed able to overcome the influence of larger doses of the alkaloid when atropine was given at the same time. E. J. EDWARDES, M.D.

741. *Seppilli on the Blood of the Insane.*—Dr. G. Seppilli has tried to determine the relative number of the globules of the blood and the proportion of hæmoglobin in the different forms of insanity. In this research he has used the same method in which he studied the blood in those infected by pellagrous insanity using the hæmatometer of Hayem and Nachet and the chromocitometer of Bizzozero. Dr. Seppilli made his observations upon two hundred patients, forty-three of which were maniacal, seventy-five pellagrous, eight in a state of melancholy with stupor, nine dements, eight epileptics, six paralytics, and nine imbeciles. The principal conclusion which Dr. Seppilli has reached is that deficiency of the blood-corpuscles and scarcity of hæmoglobin are frequently met with in the first stages of insanity, and especially in the pellagrous. The deficiencies are commoner and more marked in women than in men. Seppilli's results confirm those already published by Gallopeau, Raggi, and Rutherford Macphail.

W. W. IRELAND, M.D.

WE are glad to see that the *Nursing Record* is obliged to enlarge its borders, and now publishes twenty-four pages weekly. As a comprehensive, brightly-written, and well-edited journal of everything relating to nursing that is worth publishing, the *Nursing Record* is worthy of commendation and circulation.

LARYNGOLOGY, RHINOLOGY, AND OTOLOGY.

RECENT PAPERS.

742. Hunter.—On Affections of the Throat and Naso-Pharynx. (*Edin. Med. Jour.*, May 1888, p. 997.)

743. Graham.—On the Treatment of Tonsillitis by Salicylate of Sodium. (*Practitioner*, May 1888.)

744. Maxwell.—On Resorcin in Chronic Painful Ulceration of the Tongue. (*Lancet*, April 1888, p. 798.)

745. McBride, P.—Empyema of the Superior Maxillary Antrum, with only Nasal Symptoms. (*Edin. Med. Jour.*, April 1888.)

746. Casselberry, W. E.—Nasal Fibromata. (*Jour. of the American Med. Association*, April 21, 1888.)

747. Dehio, Karl.—Primary Tubercular Tumour of the Larynx. (*St. Petersburger med. Wochensch.*, No. 16, 1888.)

748. Natier.—Adenoma of the Velum Palati. (*Revue Mens. de Laryngologie, d'Otologie, et de Rhinologie*, Nov. 1887.)

749. Moure, E. J.—Syphilitic Gumma of the Internal Surface of the Ala Nasi. (*Ibid.*, Jan. 1888.)

750. Delstanche, C.—Considerations on the Employment of the Artificial Drum. (Reprint from *La Clinique*, Nos. 29, 30, and 31.)

751. Roosa, D. B. St. John.—The Differential Diagnosis of Peripheric and Central Diseases of the Ear. (*The Medical News*, April 21, 1888.)

752. Garrigou-Désarènes.—On Bony Tumours of the External Auditory Canal and their Removal. Cases. (*Rev. Mens. de Laryngologie, d'Otologie, et de Rhinologie*, January 1888.)

753. Ménière, E.—Complete Bilateral and Unilateral Deafness as a Result of Mumps. Four Cases. (*Ibid.*)

754. Aysaguer, P.—On Lactic Acid in Suppuration of the Ears. (*Ibid.*)

755. Bishop.—On Operations for Mastoid Disease. (*Jour. of the American Med. Association*, Nov. 12, 1817.)

Art. 742. *Hunter on Affections of the Throat and Naso-Pharynx.*—In the *Edin. Med. Jour.*, May 1888, p. 997, Dr. George Hunter contributes some instructive remarks on the treatment of various affections of the throat. Cases of chronic catarrh of the larynx are very common in general practice, and are very troublesome to cure. In these cases treatment must be applied directly to the inflamed laryngeal structures, and it is necessary to do this with the aid of the laryngoscope. The brush must be directed over the interior of the larynx, and care must be taken not to pass it too far backwards, but to drop it straight down behind the epiglottis. The regular application of a solution of chloride of zinc (gr. xxx. to ʒj.) is very efficient, combined with the use of stimulating inhalations such as the ol. pini sylvestris; of course tonics should be given at the same time, and the patient should not be disheartened if the progress of the case be slow. If the case be of long standing, a careful examination of the lungs should be made, as this class of case is sometimes liable to drift into phthisis. Regarding laryngeal phthisis, it has recently been shown that the larynx may be primarily affected by tubercular disease, and even cause the death of the patient without the most careful examination of the lungs affording the least evidence of phthisis. If primary laryngeal phthisis be detected soon enough, it is possible to cure the case by applying menthol and lactic acid. Marked anæmia of the laryngeal structures is the earliest sign to excite anxiety, and if followed by infiltration of the arytenoids, ary-epiglottic folds, or epiglottis, the diagnosis may be almost considered established. Syphilitic affections may be misleading in the secondary stage, but in the advanced tertiary stage, where great havoc is made of the epiglottis and arytenoids by rapid and deep ulcerations, the diagnosis ought to be one of no great difficulty. The absence of marked pain, the history of the case, and the results of specific treatment will prevent these cases being confounded with tubercular affections. The author then makes a few remarks on diseases of the naso-pharynx. The following conditions are enumerated as the causes of obstruction in the nares: (1) Chronic rhinitis; (2) nasal polypi; (3) post-nasal growths. As to the treatment of nasal polypi, it is stated that evulsion by forceps is a procedure not to be entertained in the majority of cases, but they should be treated by the cold snare or by the galvano-cautery.

743. *Graham on the Treatment of Tonsillitis by Salicylate of Sodium.*—In the *Practitioner*, May 1888, Mr. Graham, M.B., writes, that for eight years he has constantly used salicylate of soda in the treatment of cases of tonsillitis. There can be no doubt in its efficacy in cutting short an attack of quinsy, but it must be commenced early and given in large doses frequently. The author gives an adult from ten to twenty grains every two hours until relief is afforded, then the dose is gradually reduced. All astringent gargles can be put on one side, it is quite enough to wash out the mouth with warm gargles of permanganate of potassium, or hyposulphite of sodium. In some cases, where this drug has failed to produce a good effect, the author has obtained much benefit from using a dose of bicarbonate of sodium, from ten to twenty grains every two or three hours. Both these drugs seem to have the power of lowering inflammation and preventing suppuration, but the bicarbonate of soda has an advantage over the salicylate of soda, in that it does not produce any head symptoms. [In the *Medical Digest and Appendix*, sect. 828: 5, a large number of observations of the specific value of sodæ salicylas in tonsillitis may be consulted.—*Rep.*]

744. *Maxwell on Resorcin in Chronic Painful Ulceration of the Tongue.*—In the *Lancet*, April 1888, p. 798, Mr. Maxwell records the case of a married lady who suffered from firm indiarubber-like nodules on the tongue, with extensive bases and deep fissures, occupying a considerable part of the dorsum. There was also some ulceration, and the pain was very severe. All kinds of treatment were adopted, but nothing seemed to give any relief, and an operation was suggested, but, before deciding to undergo this, she was induced to try the effect of sprinkling a minute quantity of resorcin on the diseased surface. The very first application greatly relieved the pain, and in a few days the tongue returned to its normal size; the fissures and ulcers looked much more healthy, and were almost painless, but were not completely healed when the author reported the case.

Richard Neale, M.D.

745. *McBride on Empyema of the Maxillary Antrum with only Nasal Symptoms.*—Dr. McBride, in a short paper on this subject (read before the Medico-Chirurgical Society of Edinburgh, Feb. 1, 1888), lays stress on the presence of marked redness of the gum on the affected side, which he has observed in two cases. He also attaches value to Fraenkel's test of holding down the head after the nostril has been thoroughly cleansed, and seeing

whether pus flows from the antrum into the middle meatus.

746. *Casselberry on Nasal Fibromata.*—Dr. W. E. Casselberry reports (*Jour. of the American Med. Association*, April 21, 1888) a case of fibroma arising in the posterior part of the vault of the left nasal cavity, including the anterior perpendicular surface of the sphenoid bone. The left nostril was much distended, showing evidence of commencing frog-face ; and the fossa anteriorly was thoroughly filled in all directions by the growth. It was removed by means of the galvano-caustic snare and point in about six months, and the tumour seemed to be thoroughly eradicated.

747. *Dehio on Primary Tubercular Tumour of the Larynx.*—Dr. Karl Dehio, of Dorpat, describes (*St. Petersburger mediz. Wochensch.*, No. 16, 1888) an interesting case of this description in a man, aged 41. The tumour, which was attached to the left ventricular band, was of light-grey colour, and had a slightly irregular surface. It was attached by a broad base, and was covered with shining epithelium—presenting no sign of ulceration. The lungs appeared absolutely free from disease. Not being able to exclude malignant disease, the author advised removal of the growth, together with the whole of the ventricular band after external division of the larynx. This was done by Professor v. Wahl, and contrary to expectation the growth was found to consist of closely-packed miliary tubercles. The patient rapidly went from bad to worse, the operation-wound ulcerated, hectic fever set in, the lungs became more or less affected, and death ensued about eight weeks after the operation. A *post mortem* examination was not obtainable. The case, according to the author, besides bearing evidence of the possibility of primary tubercular affection of the larynx, should lead to caution in operating on tumours of this description, which may possibly be tubercular in character. The author himself would endeavour to destroy such a growth with the galvanic cautery. He considers that in this case an acute miliary aspiration tuberculosis of the lungs took place in consequence of the tubercle-bacilli which were contained in the growth being set free by the operation.

748. *Natier on Adenoma of the Velum Palati.*—Dr. Natier (*Revue Mensuelle de Laryngologie, d'Otologie, et de Rhinologie*, Nov. 1887) relates at length a case of this description under the care of Professor Demons. The tumour, which was of the size of a hen's egg and was not ulcerated, was easily enucleated through an incision in the mucous membrane. It was found to have had its origin in the soft palate, and consisted of diffuse adenoid tissue, resembling in structure adenoid vegetations of the nasopharynx. Recovery ensued. There was no glandular enlargement.

749. *Moure on Syphilitic Gumma of the Ala Nasi.*—In the case described by Dr. Moure (*Revue Mensuelle de Laryngologie, d'Otologie, et de Rhinologie*, Jan. 1888) of a woman with this affection, there was a red eminence with a fungating surface on the inner aspect of the left ala nasi. At its upper anterior part there was a greyish ulcer. The tumour disappeared in three weeks under the administration of a modified 'Syrop de Gibert.' As it went down, an ulcer and sequestrum were detected on the septum nasi.

750. *Delstanche on Artificial Drums.*—In an article on this subject (*La Clinique*, Nos. 29, 30, and 31, 1887), after discussing the various theories of the action of artificial membranes, Dr. Charles Delstanche, without ignoring the importance of the effect of pressure exerted on the auricles, considers that complete occlusion is capable of itself of causing great improvement in the hearing, much more frequently than is usually supposed. He brings forward several cases in support of this view. In one patient, in whom a small rupture of the membrane occurred accidentally during inflation, the deafness which ensued could be immediately relieved by the closure of the perforation by a little moistened alum. On cicatrisation of the aperture the hearing was completely restored. For closing the opening the author prefers parchment paper (*papier parcheminé*) coated over with vaseline or with balsam of Peru, on to which a small quantity of boracic-acid powder is blown. The piece of paper may be left in for weeks or months, and he has even applied it in a case in which there was a discharge from the tympanum, but then only under strict supervision. The practice of frequent removal of artificial membranes, as commonly recommended, and the employment of cotton-wool, he would confine to cases in which there is a discharge from the middle ear. The author tries the artificial membrane not only in cases in which it appears likely to be of benefit, but also in others, if only for the purpose of putting patients on their guard against the quack advertisements of artificial membranes which are so much in circulation.

751. *Roosa on the Differential Diagnosis of Peripheric and Central Diseases of the Ear.*—Dr. St. John Roosa, in a paper (*The Medical News*, April 21, 1888) intended to diffuse amongst the profession at large the means of diagnosis between peripheric and central diseases of the ear, lays down the following rules :—1. Determine the effects of noise upon the hearing power and sensibility of the patient. If noise increases or does not diminish the hearing power, the case is probably a peripheric trouble. It is central if noise diminishes the hearing. If noise is painfully disagreeable, it also points strongly to central disease of the ear. 2. Observe whether the patients hear the watch relatively as well as the voice. Those suffering from lesions beyond the tympanum usually hear the human voice out of all proportion to their ability to hear the tick of a watch. 3. Test the aërial and bone conduction by means of the tuning-fork C^2. If the vibrations be heard better and longer through the bone, it is only exceptionally that the disease is not peripheric. If, on the contrary, they be heard better through the air, the disease is one of the labyrinth or of the trunk of the nerve, or of the nerve-centres. 'Observations repeated over and over again for a number of years' have convinced the author that paracusis Willisii, as mentioned in the first rule, belongs only to peripheric affections, and never to those of the nerve.

752. *Garrigou-Désarènes on Osseous Tumours of the External Auditory Canal and their Removal.*—Dr. Garrigou-Désarènes (*Revue Mensuelle de Laryngologie, d'Otologie, et de Rhinologie*, January 1888) relates three operations in which he has removed these growths successfully with a gouge and hammer.

753. *Ménière on Deafness after Mumps.*—Dr. E. Ménière describes briefly (*Ibidem*) two cases of unilateral and two of bilateral deafness of this character. He is of opinion that in these cases

there is usually meningeal hyperæmia, giving rise to serious lesions of the auditory nerve at its origin or in its course.

754. *Aysaguer on Lactic Acid in Suppuration of the Ear.*—Dr. P. Aysaguer (*Ibidem*) recommends instillations of lactic acid in cases of granulations in the tympanic cavity, polypoid vegetations, caries, or necrosis with granulations, and roots of polypi. He commences with a 50 per cent. solution of lactic acid, rapidly passing on to the pure acid. The pain, if any, is very slight. The granulations become grey, and after a time disappear, being replaced by cicatricial tissue. He gives particulars of a case in which he removed three sequestra from the external auditory canal, whilst lactic acid instillations were employed for six months. Recovery ensued.

755. *Bishop on Operations for Mastoid Disease.*—Dr. Seth S. Bishop (*Jour. of the American Med. Association*, Nov. 12, 1887) has frequently dissipated incipient inflammation of the periosteum by means of cauterisation with cantharidal collodion or essential oil of mustard. After opening the mastoid process the author syringes the parts with bichloride solution, dusting them freely with iodoform, and inserts a drainage-tube at the bottom of the wound, sewing it up and dressing it with absorbent cotton and a bandage of antiseptic gauze. He employs both drills and chisels in the operation.

E. Cresswell Baber, M.B.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

756. Conners, Dr. W. F.—Stramonium Poisoning. (*New York Med. Jour.*, Feb. 25.)

757. Mattison, Dr.—On Cocaine Toxæmia. (*Therap. Gazette*, Jan. 16, 1888.)

758. Edson, Dr. B.—Notes on Sixteen Cases of Poisoning by the Castor-oil Bean. (*Brooklyn Med. Jour.*, February 1888.)

759. Sanguirico.—On a Modification of the Treatment of Cases of Acute Poisoning by copious Intravenous Injection (*Modificazione al processo della lavatura dell' organismo negli avvelenamenti acuti*). (*Gazzetta degli Ospitali*, Marzo 28, 1888.)

760. Booth, Dr. Mackenzie.—A Case of so-called Spontaneous Combustion. (*Brit. Med. Jour.*, April 21.)

761. Stephens, Dr. Lockhart. — On Perforating Wound of Stomach in a Case of Suicide. (*Bristol Med.-Chir. Jour.*, June.)

762. Suicidal Wound of both Carotid Arteries and both Jugular Veins not proving immediately Fatal. (*Brit. Med. Jour.*, June 30.)

Art. 756. *Conners on Stramonium Poisoning.*—Dr. W. F. Conners reports the following instance (*New York Med. Jour.*, Feb. 25). A mother and her son (aged 6) drank an infusion of stramonium in mistake for tea. The mother first complained of headache, and then became so dizzy that she could do nothing but turn round; it seemed to her that she was trying to stand while the room seemed to spin round at a rapid rate. When seen two and a half hours after, they were on the floor apparently trying to walk round each other on their hands and knees, the head of each being forcibly turned to the right. The pupils were dilated to the fullest extent, the eyes were suffused and devoid of expression, face flushed, the head oscillating from side to side when the patient was held, with a disposition to turn the head forcibly to the right, the mother muttering incoherently, the boy at intervals giving a low scream. Half a grain of morphine was injected into the mother's arm, and a quarter into the boy's, and this was repeated every half hour, until four doses had been so given; the mother was also given a large dose of powdered ipecacuanha, followed by warm water, but she did not vomit; the boy could not be made to swallow the emetic. After the second injection the vertigo was much less, and the mother then began to go through the motions of sewing, whilst the boy lay on the floor and would let no one touch him. The mother's pulse ranged between 90 and 100, the boy's between 120 and 130. Each dose of morphia was supplemented with whisky and strong coffee. After the fourth dose of morphia they both slept for several hours; the boy had several copious passages and then seemed quite well, save that his pupils were dilated; the mother complained of intense occipital pain, which lasted some days, and was troubled with obstinate constipation. It was estimated that the mother had taken the tea made from two drachms of the dried herb, whilst the boy had taken half that quantity.

757. *Mattison on Cocaine Toxæmia.*—After insisting on the possibility of poisoning by cocaine, he quoted two cases in further proof thereof. One was a man suffering from hæmorrhoids, previous to operating upon which a drachm of 4 per cent. solution was injected into the peri-anal tissues. In five minutes he felt strange, and complained of twitchings in the legs. A few minutes later the twitchings amounted to general tetanic spasms, involving the whole muscular system. The patient became unconscious, and remained so for five minutes, when he gradually rallied. The attack lasted altogether about half an hour. In a second case of operation for hæmorrhoids in a female about five grains of cocaine were injected. Fifteen minutes later the patient was seized with violent general convulsive movements, most marked on the right side. She had opisthotonos, and was unconscious for fully a quarter of an hour. There was alternate pallor and flushing, and the symptoms were followed by profuse perspiration. A number of other cases of poisoning from various sources were also alluded to. He concludes that—1, there is a lethal dose of cocaine; 2, that this dose is uncertain; 3, that toxic effects are by no means rare; 4, that the antidotes are nitrite of amyl and morphine hypodermically.

758. *Edson on Sixteen Cases of Poisoning by the Castor-oil Bean.*—In October 1887 fifteen children under six years of age indulged in a repast of raw beans taken from a castor-oil plant growing in the garden. The effect was to cause severe vomiting and prostration, lasting over forty-eight hours. The nurse, who only ate one bean, was so affected for over sixty hours that she was utterly prostrated, and was unable to resume her duties for a week. In none of the cases was there any catharsis.

Alfred S. Gubb.

759. *Sanguirico on a Modification of the Treatment of Cases of Acute Poisoning by copious Intravenous Injection.*—C. Sanguirico gives a preliminary account of a modification of the treatment of cases of acute poisoning by 'washing through the organism' by means of injection of saline solution into the venous circulation. The treatment

was described by him, as far as the action of simple salt solution was concerned, last year in the *Arch. p. l. Sci. Med.*, vol. xi., and he states now that he has recently tried with success the effect of a combination of this process with intravenous injection of an antagonistic solution. Thus dogs poisoned with strychnine, given in doses larger than could be eliminated by the aid of an injection of salt solution alone, were saved by the addition to that solution of a given quantity of chloral and paraldehyde. Conversely, animals poisoned by such a dose of curare that neither by means of strychnine alone, nor by the use of salt solution alone, could they be recovered, were saved by adding strychnine to the saline. WALTER PYE.

760. *Mackenzie Booth on a Case of so-called Spontaneous Combustion.*—Dr. Mackenzie Booth in the *Brit. Med. Jour.* for April 21 records the following instance of so-called spontaneous combustion. On Feb. 12 the charred remains of a man, aged 65, of very intemperate habits, were found in a hayloft. He had been seen to enter the stable below the night before, and had gone up to the loft. In the morning smoke was noticed to be issuing from a hole in the roof of the loft, and this led to the discovery that the deceased had been burnt to death. Dr. Booth thus describes the condition of the body and its surroundings when he arrived :—'I found the charred remains of a man reclining against the stone wall, and kept only by one of the joists and the burnt remnant of the flooring from falling through into the stable beneath. What struck me especially at first sight was the fact that notwithstanding the presence of abundant combustible material around, such as hay and wood, the main effects of combustion were limited to the corpse, and only a small piece of the adjacent flooring and woodwork immediately over the man's head had suffered. Several of the slates had fallen in over the corpse, making a small hole in the roof over it, and a small piece of the flooring had fallen through immediately round him into the stable below. The body was almost a cinder, yet retaining the form of the face and figure so well that those who had known him in life could readily recognise him. Both hands and the right foot had been burnt off, and had fallen through the floor among the ashes into the stables below, and the charred and calcined ends of the right radius and ulna, the left humerus and the right tibia and fibula, were exposed to view. The hair and scalp were burnt off the forehead, exposing the bare and calcined skull. The tissues of the face were represented by a greasy cinder retaining the cast of the features, and the incinerated moustache still gave the wonted military expression to the old soldier. The soft tissues were almost entirely consumed, more especially on the posterior surface of the body, where the clothes were destroyed, and the posterior surfaces of the femora, innominate bones, and ribs exposed to view. Part of the trousers on the anterior aspect of the legs that had escaped the impact of the slates was still represented in cinder.' The fact that only the structures actually in contact with the body had been burnt, whilst highly combustible articles close by had escaped, was probably to be attributed to the excessive stillness of the night. The increased combustibility of the body, which is justly regarded as the true explanation of such cases, was doubtless due to the fatty changes which must have resulted from the long-continued alcoholic indulgences on the part of the victim. The case is undoubtedly one which would have been admitted not long since in another country as a typical instance of spontaneous combustion.

761. *Stephens on Perforating Wound of Stomach in a Case of Suicide.*—Mr. Lockhart Stephens records the following :—S. W., aged 35, a journeyman nailer, had been under treatment in an asylum for melancholia only a few months previously, when, on June 9, 1885, whilst at work forging nails, he 'was seen with a red-hot iron about 2 feet in length, the cool end of which he had against the wall, and the heated end against his belly. The iron was so hot that it ignited his apron. One of his mates ran up, gave him a push and made him drop the iron. He said that if he was allowed to go on with his work he should be all right, and he was allowed to resume work. The iron rod was a thin one used in making horse nails. Not long after this first attempt he made the iron white hot, rushed by the man who had previously stopped him in the former attempt and again thrust the iron against his belly. The iron entered about 4 or 5 inches according to the man who pulled it out.' He was at once taken to the hospital, where he was found to be much collapsed but quite conscious ; he made no complaint of pain. His clothes were burnt through about the level of the umbilicus, and somewhat blood-stained. Just to the right of the umbilicus was a wound with scorched and jagged edges, and having the odour of burnt flesh ; it measured one-third of an inch in every diameter, and a thin bloody serum oozed from it. The patient did not rally at all ; he was much troubled with eructations and vomiting, and gas was passed through the wound; he died seven hours after his admission into the hospital. On *post mortem* examination a slight superficial eschar was found near the ensiform cartilage, marking the site of the first attempt. The other wound was found in the situation already described. On opening the abdomen more than two pints of blood were found extravasated, and the coils of small intestine in the lower part were acutely inflamed. The stomach showed two wounds, one on the inferior border, 2½ inches from the pylorus, of square shape, measuring ½ inch across, this was the point of entrance of the iron ; the other was on the anterior surface immediately below the lesser curvature, 2 inches from the pylorus, oblong in shape, measuring ¾ inch by ½ inch. The mucous membrane was projecting through from within out. On dissecting out the vessels two large branches, the right gastro-epiploic and pyloric branches of the hepatic artery ran into the upper margin of this wound, and had been, doubtless, the source of the fatal hæmorrhage. Although lunatics often inflict upon themselves most unlikely injuries, we do not know of any precisely similar case.

762. *Suicidal Wound of both Carotid Arteries and both Jugular Veins not proving immediately Fatal.* In the *Brit. Med. Jour.*, June 30, the following case which occurred in Jamaica, and seems to be well authenticated, is deserving of some notice. A coloured man, after murdering his sweetheart, entered his house and cut his throat with a razor. Some of the neighbours who actually witnessed both deeds rushed into the house, but were at first unable to find the man. The razor, blood-stained and notched, was discovered in the room where he had been observed in the act of cutting his throat, and blood-stains on the floor led from this room to the back entrance of the house. The dead body of

the suicide was found lying under the house, which was raised on supports about two feet high. The distance from the room to the door was 16 feet, and from this point to the spot where the body was found was another 16 feet, and, since there could be no doubt from the evidence of the eye-witnesses that this was a case of suicide, it follows that the man must have had sufficient power to traverse this distance after cutting his throat; and, moreover, the last half of the distance must have been performed on his hands and knees. Dr. Cargill, who examined the body a short time after death, found that the throat had been cut by a clean sweep from ear to ear, the carotid artery and jugular vein on each side being severed, as also were the trachea and œsophagus, the wound reaching back to the vertebræ. At the inquest he was asked by the coroner if it was possible for a man who had received such injuries to have retained sufficient power to traverse the distance that must have been traversed in this case, and he declined to oppose a mere medical opinion to facts sworn to by credible eye-witnesses. So far as we are aware no case of wound of the vessels on both sides of the neck in which so much voluntary power was retained by the victim has been hitherto recorded, and the case is therefore one of very great importance.

ANATOMY.

RECENT PAPERS.

763. Wagstaffe, W. W.—On the Physics of the Male Urethra. (Rep. from *St. Thomas's Hospital Reports*, vol. xvi.)

764. Wagstaffe, W. W.—On the Anatomy and Physiology of the Phrenic Nerve in Man. (Rep. from *St. Thomas's Hospital Reports*, vol. xvi.)

765. Blanc.—On the Histology of the Uterus. (*Recherches Histologiques sur la Structure du Segment Inférieur de l'Utérus à la Fin de la Grossesse. Arch. de Phys. Norm. et Path.*, 1888, No. 3, p. 265.)

766. Cunningham.—On the Musculus Sternalis. (The Musculus Sternalis. *Jour. of Anat. and Phys.*, vol. xxii., part 3, p. 391.)

767. Shore.—On the Vagus (the Morphology of the Vagus Nerve). (*Jour. of Anat. and Phys.*, vol. xxii., part iii., p. 372.)

768. Poirier.—On the Laryngeal Lymphatics (*Vaisseaux Lymphatiques du Larynx*, &c. *Bull. de la Soc. Anat. de Paris*, 1887, p. 218.)

769. Albarron.—On Replacement of Teeth. (*Développement des dents permanentes; ébauche d'une troisième dentition chez l'homme. Bull. de la Soc. Anat. de Paris*, 1887, p. 562.)

770. Lane.—On the Anatomy of the Shoemaker. (*Jour. of Anatomy and Physiology*, vol. xxii., p. 593.)

771. Darier.—On the Vessels of the Cardiac Valves. *Les Vaisseaux des valvules du cœur chez l'homme à l'état normal.* (*Arch. de Phys. Norm. et Path.*, 1888. No. 5, p. 35.)

772. Steinhaus.—On the Intestinal Epithelium of Salamandra. *Les métamorphoses et la gemmation indirecte des noyaux dans l'épithélium de la Salamandra Maculosa.* (*Arch. de Phys. Norm. et Path.*, 1888. No. 5, p. 60.)

773. Carpentier and Bertaux.—On a Venous Anomaly. *Anomalie des Systèmes de la Veine Cave Inférieure et des Veines Azygos.* (*Arch. de Phys. Norm. et Path.*, 1885, No. 5, p. 70.)

774. Tourneux.—The Organ of Rosenmüller (Epoöphoron) and the Parovarium (Paroöphoron) in the Mammalia. (*Jour. de l'Anatomie et de la Physiologie*, Mars-Avril 1888.)

Art. 763. *Wagstaffe on the Physics of the Male Urethra.*—Mr. Wagstaffe points out as the result of his observations that the urethra is rifled somewhat after the manner of a gun-barrel, but the spiral of the urethral tube which runs from right to left in about the upper three-fourths of its length usually becomes reversed near its distal extremity. The object of the spiral grooving in the case of the gun is to secure for the projectile a rotatory motion and greater precision in the direction of aim, and we may fairly assume that similar advantages of a physiological nature are gained for the outflow of the urine and semen by the arrangement of the urethral column. It is sometimes stated, he notes, that a twisted stream is one of the early signs of stricture, but this is misleading, since the normal outflow is always perceptibly spiral. This phenomenon is perhaps not altogether due to the urethral rifling, since it has been found that water forced out of a narrow, smooth-edged slit does not continue in a straight 'tape' jet, but is shot out as a spiral.

764. *Wagstaffe on the Phrenic Nerve.*—Mr. Wagstaffe calls attention in this note to the fact that the phrenic nerve sometimes gives branches to the anterior scalenus muscle in passing over it. In other cases the nerve of supply comes from the fourth cervical nerve close to the origin of the main root of the phrenic. There is thus a close relation if not a community between the motor nerve supply of the muscles of the upper and lower parts of the respiratory apparatus, and consequently a simultaneity in their action, 'a mechanism which the ordinary bellows or concertina may roughly exemplify.'

765. *Blanc on Histology of the Uterus.*—(1) The inferior segment of the uterus is covered by a decidua identical with that of the superior parts of the body of the organ. (2) In the greater number of cases the ovum adheres intimately to the lining of this same segment, and then the decidua is always perfect. (3) At this level the transformation of the mucous membrane of the body into decidua is very rarely incomplete; it follows, then, that the adhesion of the membrane is feeble or even completely defective. (4) This transformation of the mucous membrane into decidua leads to the conclusion that the inferior segment is constituted of the body of the uterus; even where the transformation is incomplete the character of the glands forbids its being considered as belonging to the cervix. (5) The mucous membrane of the neck may be more or less modified without any alteration taking place comparable to a transformation into decidua.

766. *Cunningham on the Musculus Sternalis.*—(1) The sternalis muscle is a part of the pectoralis major. (2) It is produced by a rotatory dislocation of certain of the fibres of the great pectoral. (3) Different fibres are used for this purpose in different cases. (4) The deviation of the fibres of the great pectoral restore in this portion of it the primitive direction and primitive connections of the pectoral muscle. (5) The anomaly may possibly be regarded as showing a tendency to the formation of a new muscle in man, devoted to costal inspiration.

767. *Shore on the Vagus.*—1. The vagus is a 'compound nerve,' but not in the sense generally supposed; it is rather a compound of the visceral rami of the anterior spinal nerves, and of the remnants of the brain-ganglia and lateral cords of the nervous system of invertebrata than of several

metameric nerves. 2. The visceral part of the vagus of fishes includes the branchial nerves, and has arisen from a coalescence of the visceral rami of the anterior spinal nerve segments, the corresponding motor and sensory somatic branches of which have remained separate. 3. The ganglia of the cranial nerves (5, 7, 9, 10) are the representatives of the brain lobes of nemertea, and probably of the cerebral ganglia of annelida and arthropoda. 4. The 'ramus lateralis' is of extreme ancestral origin, and is equivalent to the lateral strands in the nerve plexus of nemertea, to the main nervous system of annelida and arthropoda, and possibly also to the nerve ring of cœlenterata. 5. A study of the vagus nerve throws light on the question of the chordate ancestor, and does not tend to support the views of Dohrn and his school. 6. The value of the vagus in deciding the question of the segmentation of the vertebrate head has been much overrated.

768. *Poirier on the Laryngeal Lymphatics.*—The laryngeal mucous membrane possesses a lymphatic network which occupies its most superficial dermic layer. This network, equally well developed in the vestibular, ventricular, and sub-glottic regions, becomes notably smaller at the level of the edges of the vocal cords, especially the true. Superior and inferior trunks spring from this network. These, speaking generally, follow the superior and inferior laryngeal arteries. Several groups of ganglia receive these trunks—(1) superior, on each side at the level of the division of the common carotid; (2) inferior, smaller, either in front of the crico-thyroid membrane (pre-laryngeal ganglion) or on the sides of the cricoid cartilage. The author calls attention to the following pathological deductions:—1. Adenitis consecutive to acute or chronic laryngeal affections may manifest itself in any of these ganglia. 2. A certain number of tumours, abscesses, and fistulæ, whose pathogeny is obscure, may be traced to affections of the pre-laryngeal ganglion.

769. *Albarron on Replacement of Teeth.*—1. All that portion of the maxilla comprised between the alveolar border and the *cul-de-sac* of the enamel organ of the permanent tooth disappears by rarefying osteitis. The alveolus is thus a new formation, developing parallel with the tooth it contains. The alveolus of the temporary tooth disappears in the infant as that of the permanent does in the aged. 2. The alveolo-dental ligament, whose formation is contemporaneous with that of the root and of the alveolus, is independent of the lining of the follicle. It is formed from that part of the connective tissue which is neither transformed into bone nor cementum. 3. The root of the milk-tooth is destroyed by simple osteitis. 4. The permanent tooth pushes out because (*a*) the soft and hard parts situated above it are destroyed; (*b*) of its own growth; (*c*) the inferior maxilla develops chiefly by its inferior border. 5. There is in man, independently of a certain amount of epithelial *débris* of little importance, a voluminous epithelial mass situated behind the permanent tooth, and taking origin probably from the epithelial cord of this tooth, which may represent an atrophied organ corresponding to a third row of teeth.

770. *Lane on the Anatomy of the Shoemaker.*—Mr. Lane in this contribution gives another of his interesting accounts of skeletal alterations due to the occupation of the individual. For the numerous details of his observations we must refer readers to the paper itself. An important deduction from them is as follows, and is of great interest in connection with the present controversy as to the transmissibility of acquired defects or conditions. The higher mammals are unable to reproduce portions of their body which are destroyed or injured. They possess, however, a much more remarkable power, which, he thinks, is the most important factor in evolution. It is that they are able to produce, in response to a tendency to its development, which tendency has arisen in consequence of the individual being subjected to the influence of mechanical forces other than those that determined his evolution, a more or less complete change in the character of the anatomy and physiology of a part or of the whole of their bodies. If it is impossible for this tendency to result in its actuality during the lifetime of that individual, it is able to transmit that tendency to change to its offspring, in which it may produce the actuality.

771. *Darier on the Vessels of the Cardiac Valves.* The aortic and pulmonary valves never contain vessels in the normal condition, either in the adult or newborn child. In the auriculo-ventricular valves of the adult there are no vessels in the fibro-elastic membranous portions. As far as the tricuspid valve is concerned this includes the whole of the flaps. A similar remark applies to the left flap of the mitral valve. The right flap of this orifice has, however, a small upper muscular portion. In the new-born child, whilst more vascular, the large portions of the auriculo-ventricular valves are without vessels. In the dog the sigmoid valves are non-vascular, the auriculo-ventricular are vascular in about half their depth. The condition in the rabbit is similar to that of the new-born child.

772. *Steinhaus on the Intestinal Epithelium of Salamandra.*—1. Nuclei of the epithelial cells of the intestine of the salamander contain, besides the chromatic network, chromatic globules (nucleoli), belonging to two types, plasmosomes and karyosomes. The first may be solitary, but the latter are generally combined with the first. 2. Nuclei may become notched, and the nucleoli become extra-nuclear by lying in the notches. 3. In the notches may also be found secondary nuclei (nebenkerne) and young nuclei. 4. These formations correspond to divers phases of a process of evolution; commencing by the combination of a plasmosome and a karyosome, and terminating by the production of a young nucleus (indirect gemmation). 5. The nuclei produced by indirect gemmation seem to replace the old cellular nuclei, which become disintegrated during their development.

773. *Carpentier and Bertaux on a Venous Anomaly.*—The anomaly, which was found in the body of an adult man, consisted in the absence of the vena cava inferior, whose place was taken by the vena azygos major, and, on the other hand, of the complete independence of the portal system, the efferent vessels of which formed a single, very short, sub-hepatic trunk, which opened directly into the right auricle of the heart.

BERTRAM C. A. WINDLE, M.D.

774. *Tourneux on the Epoöphoron and the Paroöphoron.*—After examining and comparing homologous parts in the internal organs of different mammals, M. Tourneux has arrived at the following conclusions:—1. The organ of Rosenmüller or epoöphoron imitates with precision the disposition of the canals in the body of the epididymis. It is composed of a collecting trunk or tube, which receives in its course about fifteen tubules. The distal ex-

tremities of the latter are lost by their convergence into a kind of lacunar plexus (*réseau lacunaire*). This plexus may give rise, on its opposite side, to a certain number of generally solid strings of epithelium. Tourneux terms the collecting tube (the homologue of the canal of the epididymis) the 'duct (*canal*) of the epoöphoron'; the tubules which it receives he calls the 'efferent canals'; and to the plexus (homologue of the *rete vasculosum testis*) he gives the title of 'rete ovarii.' The solid epithelial strings, homologues of the tubuli seminiferi, he calls 'medullary cords' (or 'segmental canals') as they have already been termed. 2. The homologies of the organ of Rosenmüller and the body of the epididymis are also evident in the structure of their component parts. The duct of the epoöphoron and the efferent canals are lined with prismatic ciliated epithelium; the tubes of the rete ovarii, on the other hand, bear cubical epithelium devoid of cilia. 3. This arrangement of structures is only seen to perfection in exceptional cases. In the sheep the organ of Rosenmüller is sometimes perfect; it can be readily studied on account of its position outside the ovary, between the layers of the broad ligament. As a rule (in the carnivora, cetacea, &c.), the rete is lodged in the bulb of the ovary, justifying its name 'rete ovarii.' The organ of Rosenmüller is invariably attached to the outer extremity of the ovary. 4. One or more of the component parts of the organ of Rosenmüller may be wanting. Hence in different species we find very varied forms of this organ, only to be understood by comparison with a more perfect type—in the sheep, for example. In the cow, the outer half is entirely absent, the rete alone remains and passes, to the extent of about four and a half inches, beyond the limits of the ovary. 5. In woman, on the contrary, the organ of Rosenmüller has completely atrophied towards its inner portion contiguous to the ovary, and is only represented by the duct of the epoöphoron and by about fifteen efferent canals. 5. Vestiges of the urinary portion of the Wolffian body ('parovarium' or 'paroöphoron') are to be found as scanty relics in the broad ligament below the ovary, in the sheep, cow, dolphin, &c. In adult women these relics appear to be entirely wanting. [It is clear that Professor Tourneux's nomenclature differs greatly from that which is current in English works.—*Rep.*]

Alban Doran.

BACTERIOLOGY.

RECENT PAPERS.

775. Popoff, Dr. J. P.—The Bacteriology of Acute Articular Rheumatism. A Preliminary Note. (*Meditz. Pribavlenia k'Morskomü Sbornikii*, November 1887, p. 401.)

776. Cattani.—The Influence of Different Conditions of Temperature on the Vitality of Cholera Virus. (*Congresso Medico di Pavia, Gazz. degli Ospitali*, Nov. 16, 1887.)

777. Marchiafava.—Recent Studies on Malaria. (*Congresso Medico di Pavia*, 1887.)

778. Cahen.—On the Reducing Power of Bacteria. (*Deutsche med. Zeitung*, No. 8.)

779. Gottstein, Dr. A.—On the effect of Lanolin on Micro-organisms. (*Deutsche med. Zeitung*, No. 8, 1888.)

780. Lesage, M. A.—On the Green Diarrhœa of Children. 'Du bacille de la diarrhée verte des enfants du premier age.' (*Arch. de Phys. Norm. et Path.*, 1888, No. 2, p. 212.)

Art. 775. *Popoff on the Microbe of Acute Articular Rheumatism.*—In a short preliminary note in the *Meditzinskia Pribavlenia k'Morskomü Sbornikü*, November 1887, p. 401, Dr. J. P. Popoff, senior house-physician to the Marine Hospital in Nicolaëv, states that after prolonged and laborious researches he has succeeded at last in discovering and isolating the pathogenic microbe of acute articular rheumatism. Having obtained, with all sterilising precautions, a drop of blood from the finger of a febrile rheumatic patient, the writer introduced it into a test-tube with meat-peptone bouillon kept at an ordinary room temperature (18° or 20° R.). By the end of ten days there was found a superficial growth in the shape of 'islets of a bright lemon-yellow colour.' 'Similar citrine patches, having the consistency of a somewhat thin jelly, were obtained also on the potato-slice.' Under the microscope 'the patches proved to consist of motionless cocci, partly isolated, partly forming rows or chains.' The cocci were 'smaller than those of Nessler, but larger than those of erysipelas.' They took in Weigert's gentian violet. The identical micro-organisms were also detected by Dr. Popoff at the *post-mortem* examination of a rheumatic subject in the synovial fluid from inflamed joints and 'in the heart.' An injection of the cultures into the external jugular vein in two rabbits 'gave rise to acute articular rheumatism with pericarditis and endocarditis.' In both of the animals (subsequently killed) the blood, synovial fluid, and 'sections from the heart' were found to contain the same micrococci. The staining procedure is given thus:—'Specimens are placed into Weigert's solution for half-an-hour, and are gently heated every five minutes. Sections from the tissues (heart) are kept in the solution for twenty-four hours. After washing out with distilled water they are put for five minutes into Gram's iodine solution, then into alcohol, and, after drying, are mounted in Canada balsam. The tissue specimens should be kept, in addition, before mounting, in clove-oil.' [The incompleteness of this 'preliminary' communication is too obvious to be dwelt upon, and too considerable to call forth any 'preliminary' criticism in regard to the essence of the matter. No drawings are presented. Dr. Popoff does not mention whether he is acquainted with Dr. Alfred Mantle's researches concerning the bacteriology of acute rheumatism, published in the *Brit. Med. Jour.*, June 25, 1887, p. 1381.—*Rep.*]

V. Idelson, M.D.

776. *Cattani on the Influence of Different Conditions of Temperature on the Vitality of Cholera Virus.*—These researches were made with pure cultivations of the comma-bacillus, either in agar-agar, or in peptonised broth; part were maintained at a temperature of 35°C.; some were exposed to the oscillations of the temperature of the air; some exposed for a certain time to a temperature below that of freezing under snow. The following results were obtained:—1. The comma-bacillus of Asiatic cholera, maintained in cultivations at 35°C., and frequently transplanted, retained after a year its vegetative power, as well as its biological and morphological character. 2. Cultivations of comma-bacillus in broth left to grow old at a temperature of 35°C., even after 7 or 8 months, furnish positive inoculations with rich development. 3. The cultivations of comma-bacillus, on the other hand, exposed to the variations of the ambient temperature, soon lose their vegetative power, and after even only three months give no result when inoculated. 4. The comma-bacillus kept for 5, 7, 9, 11

days at the temperature of melting ice, maintain almost unaltered its vegetative power, which only after 14-16 days becomes enfeebled and finally extinguished. But—and this is of great interest—cultivations exposed for 16-35-44 days to the temperature of melting ice, if kept at a temperature of 35°C. for 15 or 20 days, regain their vegetative power.

777. *Marchiafava on Recent Studies on Malaria.* In a paper read at the Medical Congress at Pavia, Professor Marchiafava said that he found in great quantity amœboid bodies without pigment, in the blood of patients suffering from grave and continued malaria; in the typical intermittent forms he found the pigmented bodies of Laveran and Richard, the cycle of development of which has been demonstrated by Professor Golgi. In grave remittent forms, he did not find the scission described, the prompt administration of quinine being necessary to save the patient's lives. In the comatose forms he found the cerebral capillaries invaded, and a precocious scission of the amœboid bodies within the blood-corpuscles themselves. This shows that the virus is produced continually, and not only in the spleen, but also directly in the blood. Another alteration of the red corpuscles is the following. The red corpuscles appear atrophic, in colour similar to that of old gold; finally they are consumed by the white corpuscles, which also devour the plasmodes. He was able to watch a white corpuscle devour one by one all the round bodies, which are formed by the scission of a free pigmented body. He asks, therefore, if these facts must be attributed to a degenerative process of the corpuscles, or to the development of a parasite. For a long time he has professed the first opinion, but now considers, (1) that the forms described have no analogy with any other degenerative process; (2) that they have most marked and characteristic movement; (3) that, as Golgi has proved, they have a special cycle of development in close relation with the febrile attacks; (4) that they diminish in chronic forms, in which conversely they ought to increase, if they were attributable to a degenerative process; (5) that they are transmissible from man to man by endo-venous injection. G. D'ARCY ADAMS, M.D.

778. *Cahen on the Reducing Power of Bacteria.*—The following extract from the *Zeitschrift für Hygiene* is given in the *Deutsche med. Zeitung.* In order to study the biology, and particularly the oxygen respiration, of bacteria, Cahen added to the usual nutritive solutions such colouring matter as was not easily affected by chemical changes. He found a litmus solution answer this purpose, while at the same time it indicated the reaction of the nutritive solutions as well as the amount of oxygen consumed. It appeared that all those bacteria which liquefy gelatine are at the same time capable of reducing litmus. Further, in all cases in which reduction of the litmus occurred, there was also in the first few days an acid reaction of the solution. With Ehrlich, Cahen regards reducing-power as the property of all living protoplasm. Anaërobes produced on gelatine, to which litmus had been added, discoloured the gelatine, while the colour was restored by liquefying the gelatine by warmth and mixing air with it; even mere contact with the air reproduced the colour. 'Anaërobes are distinguishable from all other organisms by this, that they are not able to draw their requisite amount of oxygen from the free oxygen of the air, but need a supply of fresh oxygen from the medium whilst they are being hatched.' Cahen considers that the relation of bacteria to reducible oxygen affords a valuable criterion for determining the various species. Thus it is easy to distinguish between the spirillum of Asiatic cholera and spirillum Finkleri and spirillum tyrogenium. The suspected colonies are inoculated on nutritive bouillon, with litmus added, and kept in a temperature of 37°. If next morning the solution is discoloured it is certain that they are the cholera spirilla, unless a change has taken place. On the other hand, the Finkler and tyrogenium species do not at this temperature develop any power of reduction on the litmus solution.

779. *Gottstein on the Effect of Lanolin on Micro-organisms.*—The results of Dr. A. Gottstein's (Berlin) experiments on this subject are thus given in the *Deutsche med. Zeitung.* (1) The bacteria which effect a spontaneous decomposition of glycerine fats belong presumably to the class of anaërobes; a number of aërobe germs (even the putrefactive) perish on a medium containing fat. But the term of continuance of this retrogressive metamorphosis is decided by the proportion of fat to the other ingredients of the nutritive medium. (2) Free fat contains anaërobes for some days after it is exposed; but lanolin has under similar circumstances neither aërobe nor anaërobe germs. (3) Glycerin fats may be so impregnated with bacteria, that the latter can pass through the fat to the lower lying infectible substances, while lanolin cannot be permeated by bacteria. It acts, therefore, as a preventive of decomposition when laid over infectible substances. JOHN ELLIOTT.

780. *Lesage on the Green Diarrhœa of Children.*—The non-bilious green diarrhœa of children is bacillary, contagious, and transmitted most frequently through the air. It is caused by the introduction into the intestines of a bacillus which has a special form and reactions. This bacillus gives a green tint to the stools by the production of a special pigment. Its characters enable it to be distinguished from other micro-organisms of a green tint, such as *B. termo* and *B. pyocyaneus.* (*See* LONDON MEDICAL RECORD for Dec. 15, 1887, Art. 7,594.) BERTRAM C. A. WINDLE, M.D.

MEDICAL CHEMISTRY.

RECENT PAPERS.

781. SALKOWSKI.—The Basic Properties of Kreatinin. *Kleinere Mittheilungen.* The Colour Reactions of Albumin, &c. (*Zeit. für physiol. Chemie*, February 1888.)

782. KOSSEL.—On Adenin. *Ueber das Adenin.* (*Zeit. für physiol. Chemie*, February 1888.)

783. GOLDMANN AND BAUMANN.—On Cystin. *Zur Kenntniss der Schwefelhaltigen Verbindungen des Harns.* (*Zeit. für phys. Chemie*, February 1888.)

784. MYLIUS.—Note on the Preparation and Composition of the Biliary Acids. *Notiz über die Darstellung und die Zusammensetzung der Cholsäure.*

785. KRÜGER.—On the Coagulation of the Blood. *Blutgerinnung.* GREEN.—On the Influence of Calcium Sulphate upon Coagulation. (*Zeit. Biol.*, No. 24; *Jour. of Physiol.*, No. 8.)

786. CONSTANTIN PAUL, DR.—On Gunsburg's Reaction for the Detection of Hydrochloric Acid in the Gastric Juice. (*France Méd.*, Feb. 23, 1888.)

787. WURTZ.—On Volatile Bases in the Blood and in Expired Air. (*Compte-rendu des Séances de la Société de Biologie*, Jan. 20, 1888.)

788. RIEDEL.—On Iodotrichloride as a Disinfectant, an Antiseptic, and a Poison. (*Deutsche med. Zeitung*, No. 50, 1888.)

ART. 781. *Salkowski on the Basic Properties of Kreatinin. Has kreatinin basic properties?*—This body is usually described as being strongly alkaline, and capable therefore of displacing ammonia from its combinations. Salkowski, however, is still of opinion that the strongly alkaline reaction ascribed to it depends really on the presence of alkaline ash derived from the basic carbonate or other salt employed in its preparation; and some recent experiments made by him with pure kreatinin confirm his previous results.

The Colour Reactions of Albumin.—As a part of the albumin molecule belongs to the aromatic series, these colour reactions possess a high degree of interest. Among its decomposition products three aromatic groups are, without doubt, present—the phenol group, to which belong tyrosin, phenol, and kresol; the phenyl group, including phenylacetic and phenylpropionic acids; and the indol group. These groups may be regarded as existing preformed; or, with Maly, we may suppose that only one aromatic group is preformed, which yields the others under certain conditions.

Millon's reaction, as is known, is characteristic of albumin and its digestion products, but not so of gelatin or its pepton. As Kühne has pointed out, this reaction depends probably on the preformed tyrosin present, a body which we know is absent from gelatin.

The xanthoproteic reaction depends without doubt upon the building up of nitro-derivatives; the phenol and the indol groups being those chiefly concerned, and the phenyl only to a slight extent, or not at all. The xanthoproteic reaction might be advantageously employed, Salkowski thinks, for the estimation of pepton, and probably also of albumin, as it would be free from the errors to which Schmidt-Mülheim's caustic soda and cupric sulphate process is liable, in which the determination is made by a comparison of the colour intensity obtained with these reagents when added to two pepton solutions, one of known and the other of unknown strength. *When strong sulphuric acid is added to a solution of albumin in acetic acid*, as Adamkiewicz has pointed out, a purple-coloured solution is obtained giving an absorption band between B and F, a band first making its appearance, according to Krukenberg, between D and E, together with a weaker one between E and F, the former, however, gradually disappearing, whilst the latter becomes more evident. This reaction depends on the presence of the third aromatic group mentioned above, but it is doubtful whether it is due to the skatolcarbonic acid alone, or to the indol and skatol.

The Influence of Phenylacetic Acid on the Decomposition of Albumin.—This acid was given to rabbits in the form of the soda salt (about two grammes daily), and the urine was alone examined. From the experiments made it was concluded that the elimination of nitrogen was markedly increased, and that, while the total sulphuric acid was likewise increased, the sulphuric acid, combined with organic bases, was generally diminished, this being dependent no doubt on the lessened putrefactive decompositions occurring in the alimentary canal.

782. *Kossel on Adenin.*—By the decomposition of nuclein by means of dilute acids a substance having the formula $C_5H_5N_5$ is obtained, to which the name of adenin has been given. This body is widely spread throughout the organs and tissues both of animals and plants, owing to its being a characteristic constituent of the cell nucleus. It yields a pure white sublimate which is very light, and appears under the microscope as a loose collection of small needles. In hot water it is easily soluble, from which crystals separate on cooling, these losing their water of crystallisation at 53°, and subliming at 220°. The following are some of the combinations formed by adenin: $C_5H_5N_5,HCl + \frac{1}{2}H_2O$; $C_5H_5N_5,HNO_3 + \frac{1}{2}H_2O$; $(C_5H_5N_5,HCl)\ PtCl_4$; $C_5H_5N_5Ag_2O$. Substitution products can also be readily obtained, as acetyladenin and benzoyladenin. On the other hand, it is only with difficulty acted on by acids, alkalies, or oxidising agents. Thus, it can be boiled for an hour with baryta water, caustic potash, or hydrochloric acid without being attacked; this, however, occurs if the adenin is heated in a sealed tube with dilute hydrochloric or concentrated hydriodic acid; and by the action of fused potash at 200° potassic cyanide is formed. Adenin probably exists in the organism under conditions favourable to change. These conditions, so far as reduction processes are concerned, are undoubtedly present in every living cell. The reduction starts an impulse by means of which the oxygen-free-adenin is changed into a body which takes up oxygen with avidity; nor can there be any doubt that an intermediate product with such strong affinities must act as the starting point of important chemico-physiological processes, especially of the synthetic kind.

783. *Goldmann and Baumann on Cystin.*—Whether normal urine contains cystin or bodies similar to it is still questionable. Stadthagen, in a recent paper, affirms that they are not present, or only in extremely small amount. The decomposition of the cystin was effected in his experiments by boiling with lead solution and alkali, the resulting sulphide being decomposed with hydrochloric acid, and the liberated sulphuretted hydrogen estimated by silver solution. As the result of twelve experiments Stadthagen obtained from a litre of urine a mean of 0·3 milligramme of sulphur. When a solution of cystin in caustic soda is shaken with a few drops of benzoylchloride a voluminous silky precipitate of a sodium salt of benzoylcystin makes its appearance, $C_6H_{10}N_2S_2O_4(C_7H_5O)_2$. This benzoylcystin is strongly acid, almost insoluble in water, slightly soluble in pure ether, and comparatively soluble in alcohol, from which it separates in fine needles. When one gram of pure cystin in dilute alkaline solution is shaken up with 10 cubic centimètres benzoylchloride, 1·7 gramme benzoylcystin is obtained instead of 1·86 gramme. By boiling this benzoylcystin with alkalies it is split up and sulphur is deposited. Now, as benzoylcystin can be easily removed by ether from watery solutions, we can by this method separate cystin, even when present in small amount, from the other urinary constituents. As a test 10 milligrammes benzoylcystin were added to 100 cubic centimètres fresh urine, the mixture strongly acidulated, and then extracted with ether. The residue from the ether was next dissolved in caustic soda, and this decomposed by boiling lead solution, from which resulted a precipitate of lead sulphide. An analogous experiment was next made in which 10 milligrammes of cystin, dissolved in caustic soda, were added to a similar quantity of fresh

urine, and then 10 cubic centimètres benzoylchloride and 70 cubic centimètres caustic soda (1·12 sp. gr.), and the whole well shaken. The collected precipitate was now shaken with ether strongly acidulated with sulphuric acid. After distilling off the ether, the residue, which consisted chiefly of benzoic acid, but also contained benzoylcystin, was heated over a water bath for several hours with caustic soda and some drops of acetate of lead solution. The resulting sulphide of lead, after having been washed with dilute acetic acid and alcohol, and dried, gave a weight of 0·0135 PbS, corresponding to 0·00655 cystin; 200 cubic centimètres normal urine, it was found, furnished on an average 0·0025 PbS. As the result of a series of experiments the authors conclude that in normal urine cystin or a body allied to it is present in small amount; that by boiling an alkaline solution of cystin its sulphur is slowly and only incompletely separated; and that this decomposition of the cystin is still less complete if the cystin-holding urine is treated with an alkaline lead solution.

784. *Mylius on the Biliary Acids.*—The method of preparation adopted and recommended is this: Fresh ox-bile is boiled for 24 hours with the fifth of its weight of caustic soda (30 per cent.), loss by evaporation being made good. The alkaline fluid is saturated with carbonic acid and evaporated to dryness. From the dry residue cholate of soda is extracted by means of strong alcohol. In the alcoholic filtrate choleic acid is also present, as well as certain fatty acids. To separate these the solution is diluted with water until the mixture contains about 20 per cent. of alcohol, and baric chloride added to complete precipitation. From the filtrate the choleic acid is separated by the addition of hydrochloric acid, and the viscid precipitate will become crystalline after several hours. To free it from adherent water it is kneaded with a little alcohol, the separated water poured off, and the operation several times repeated. A great difference of opinion exists as to the correct formula for this body. Strecker's is $C_{24}H_{40}O_5$, but $C_{25}H_{40}O_5$ has also been proposed, while Latschinoff affirms that the correct formula is $C_{25}H_{42}O_5$. In a previous paper Mylius upheld Strecker's formula, and accordingly Latschinoff again carefully re-examined this acid and its derivatives with the result of confirming his own formula; but Mylius, in the present paper, still adheres to his former statement as to the correctness of Strecker's formula.

785. *Krüger on the Coagulation of the Blood. Green on the Influence of Calcium Sulphate upon Coagulation.*—By simply cooling peptone plasma Wooldridge has obtained what he calls A fibrinogen, and which he regards as the important factor in coagulation; two others, however, being likewise concerned. A and B fibrinogen are compounds of lecithin and proteid; and the fibrin, according to Wooldridge, is formed by the transference of the lecithin from the A to the B fibrinogen: the ferment, according to this theory, being of secondary importance. A compound of lecithin and proteid closely allied to the A fibrinogen, and its probable precursor, has been found by Wooldridge in the testis and thymus gland of the calf, in lymphatic glands, and in the red corpuscles. It is said to be capable of causing general intravascular clotting in the absence of all cellular elements. This last statement Krüger disputes in the present paper, and his experiments lead him to conclude that both inside as well as outside the body the chief part in coagulation is played by the corpuscular elements. [Fibrin ferment is present in a saline extract of washed blood-clot; but if this extract is heated nearly to boiling point the action of the ferment is delayed and not destroyed, while a definite and fairly constant amount of calcic sulphate is found to be present in the ash. When 1 cubic centimètre of a saturated solution of calcic sulphate is added to 10 cubic centimètres of dilute magnesic sulphate plasma, coagulation sets in rapidly, even 0·001 per cent. of the salt having considerable clotting power. But this salt cannot be regarded as the fibrin ferment, as its addition to pericardial fluid, or to a sodic chloride solution of fibrinogen, brings about no coagulation in either fluid. When the ferment, however, is present, the coagulation is quickened by adding the salt. Peptone plasma was next dialysed for three days into dilute sodic chloride solution (0·6 per cent.). No clotting occurred on diluting this plasma with saline solutions, or on the passage of a current of carbonic acid gas; but it set in rapidly when a little calcic sulphate was added. This and other similar experiments tend therefore to prove that coagulation does not occur readily in the absence of calcic sulphate. Green suggests that the fibrin ferment exists as a zymogen in plasma, and is converted into a ferment by the action of calcic sulphate; but quantitative experiments indicate that fibrin is not due to any direct union with this salt. Just, however, as calcic phosphate is necessary for the proper activity of the rennet ferment, as demonstrated by Hammarsten, so the calcic sulphate may be necessary to the action of the blood ferment.]

T. CRANSTOUN CHARLES, M.D.

786. *Constantin Paul on Gunsburg's Reaction for the Detection of Hydrochloric Acid in the Gastric Juice.*—Gunsburg's test consists of a solution of phloroglicine vanillin. It yields a red coloration in presence of any inorganic acid. To obtain gastric juice for experimental purposes, M. Constantin Paul gives the patient some hard white of egg and a glass of water. An hour later he withdraws part of the stomach contents and proceeds to test it. In the course of his investigations he found that stale eggs gave rise to a rose or red colour, according to the degree of staleness, due to the presence of sulphuretted hydrogen. He found, moreover, that phosphates of soda in an alkaline solution yielded the same result. He concluded that the reaction had no value as a test for free hydrochloric acid.

ALFRED S. GUBB.

787. *Wurtz on Volatile Bases in the Blood and in Expired Air.*—M. Wurtz publishes in the *Compte-rendu des Séances de la Société de Biologie*, of Jan. 20, some notes on the presence of volatile bases in the blood and in the air exhaled from the lungs. To collect and isolate the volatile bases which pass from the blood into the air exhaled, M. Wurtz stirred a solution of oxalic acid at 1 per cent. among it, using a special apparatus. This apparatus is so constructed as to avoid error arising from the projection of saliva or solid particles. When a sufficient number of cubic mètres of air has passed into the apparatus the solution of oxalic acid is saturated with pure carbonate of lime, as free from chloride or sulphate as the solution is acid. If necessary the solution is neutralised by adding a drop or two of lime water, which immediately precipitates the oxalic acid. Then filter; neutralise exactly by a

trace of chlorhydric acid; evaporate in vacuo. Various chlorhydrates are thus obtained, among which chlorhydrate of ammonia predominates, and a certain proportion of an organic base determined by M. Wurtz by the following reagents. Precipitated by Bouchardat's reagent, also by double iodurate of potassium and of mercury. Formation of a soluble chloroplatinate, crystallising in short needles. This chloroplatinate seemed to have the same crystalline form as that of one of the bases of the blood isolated by M. Wurtz. M. Wurtz was not able to analyse soluble chloro-aurate nor to experiment on its physiological effects, which he intends to do on future occasions. W. VIGNAL.

788. *Riedel on Iodochloride as a Disinfectant, an Antiseptic, and a Poison.*—At the request of Langenbuch, Riedel has given in *Arbeiten aus dem Kaiserl. Gesundheitsamt*, vol. ii., the results of his examination of the disinfecting and antiseptic properties of iodotrichloride. As the powder (yellowish red) is very pungent, and consequently the working with it affects the eyes and causes coughing, a concentrated solution in water was always kept ready, from which every day fresh diluted solutions (1 per mille) were prepared. The latter quickly assumed a darker brown colour. The effect was tried on anthrax spores, hay-bacilli spores, staphylococcus pyogenes albus, &c. Infusions were dried on silk threads, or gelatine being first impregnated with iodotrichloride and then inoculated with spores. The following is a summary of the results:—1. In a water solution iodotrichloride is an effective disinfectant, a solution of 1 per mille killing in a short time the hardiest of bacilli spores. Dissolved in oil or alcohol it loses its power. Its effect far exceeds that of carbolic acid, and most nearly approaches to that of sublimate. 2. In a 1 per mille solution its effect on bacilli free of spores, and on cocci, is about equal to a 3 per cent. carbolic solution. On being still further diluted it remains more effective than carbolic acid. 3. Its antiseptic properties (retarding development) in cases of the micro-organisms of traumatic infectious diseases are apparent when it is added to the gelatine in the proportion of 1 to 1,000. 4. Experiments on rabbits have removed the fear lest the use of iodotrichloride in surgical cases should cause poisoning. 5. The results of trials of disinfection on silk threads impregnated with matter free from spores, proves how the destruction of otherwise not hardy micro-organisms may be rendered difficult by unfavourable mechanical conditions. 6. In order to gain a standard for the effect of a new disinfectant, it is important to institute at the same time comparative trials with a well-known disinfectant. 7. With regard to former results concerning the effect of disinfectants gained from impregnated silk threads, and confirmed by experiments on gelatine, it seems desirable that a new test should be adopted, in which a thorough removal of any possible traces of the disinfectant could be accomplished, as well as a thorough saturation of the silk threads with the nutritive gelatine, while the cultivations should be watched for a long time. JOHN ELLIOTT.

DR. STOCQUART, in the *Paris Médical*, Feb. 18, 1887, calls attention to an easy method for preventing the lenses of instruments from becoming dim, while being used to examine cavities. It suffices to spread a drop of glycerine on the lens. This done, it can be introduced in the throat, for example, without becoming dim.

DISEASES OF CHILDREN.

RECENT PAPERS.

789. HOOPER.—On Adenoid Vegetations in Children. (*Boston Med. and Surgical Jour.*, vol. cxviii., No. 11.)

790. JACOBI.—On the Therapeutics of Infancy and Childhood. (*Archives of Pediatrics*, vol. v., No. 4.)

791. SEIBERT.—On Cerebral Paralysis in Infancy. (*Boston Med. and Surg. Jour.*, vol. cxviii., No. 8.)

792. TAYLOR.—On Pneumonia Crouposa a Frigore.—(*Archives of Pediatrics*, vol. v., No. 4.)

793. MILLER.—On the Earliest Symptoms of Hereditary Syphilis. (*Jahrbuch für Kinderheilkunde*, Band xxvii., Heft 4.)

794. SHOEMAKER.—On Infantile Eczema. (*Canada Med. Record*, vol. xvi. No. 5.)

795. FRIEDLÄNDER.—On a Case of Scleroderma with Recovery. (*Archiv für Kinderheilkunde*, Band ix., Heft 5.)

796. HIRSCHSPRUNG.—On Congenital Constriction of the Pylorus. (*Jahrbuch für Kinderheilkunde*, vol. xxviii., Heft 1.)

797. COOPMANN.—On a Fatal Case of Pyæmia following Dental Caries. (*Berliner klin. Wochensch.*, No. 23.)

798. ROULLAND, DR.—On Multiple Abscesses in Children at the Breast. (*Annales de Gyn.*, February 1888.)

799. GRIFFITH, DR. J. P. CROZER.—On Antipyrin in Whooping-cough. (*Therapeutic Gazette*, Feb. 15, 1888.)

800. MICHAEL.—On Nasal Insufflations in Whooping-cough. (*Rev. Gén. de Clin. et de Thérap.*, March 1, 1888.)

801. LAURENCIN, DR.—On a Case of Chorea cured by Antipyrin. (*Lyon Médical*, March 11, 1888.)

802. FREDET, DR.—On a Case of Tardy Infantile Syphilis with Infection of Nurse. (*Arch. de Tocologie*, April 1888.)

803. COMBY, DR. JULES.—On Rachitis and Phosphorus. (*Rev. de Thérap.*, April 15, 1888.)

804. AUDRY, DR.—On Insanity in Children. (*Lyon Médical*, Feb. 26, 1888.)

805. PETCZYNSKI, DR.—Ascarides as a Cause of Intestinal Obstruction. (*Vratch*, No. 6, 1888, p. 116.)

806. VAKÜLOVSKY, DR. NIKOLAI N.—Two Extraordinary Cases of Numerous Ascarides. (*Meditzinskia Pribavlenia k' Morskomü Sborniküi*, December 1887, p. 348.)

ART. 789. *Hooper on Adenoid Vegetations in Children.*—Dr. Franklin Hooper begins by pointing out the difficulty of examining with the rhinoscope the naso-pharyngeal cavity in children; but, fortunately, an accurate diagnosis is easily made by passing the index finger upwards behind the soft palate. The first symptoms to attract attention to a child with this complaint are its difficult breathing (especially at night) and a dull heavy look about the eyes. The child shows a tendency to repeated attacks of cold in the head, particularly during the winter months. In the majority of instances deafness supervenes, and ultimately, if the true nature of the case has not been made out, the child presents the following characteristics. It breathes exclusively through the mouth, which is constantly half open. Its expression is dull and stupid, or even idiotic. Sleep is light, and while it lasts the breathing is so laboured that suffocation appears imminent. On waking, which often happens with a start, as from a nightmare, the mouth is parched. During the day, owing, perhaps, to deafness, the child is languid, inattentive, and irritable. On inspection, the soft palate appears thick, immovable, and bulged forwards, and the palatine arch is high. The tonsils are frequently concurrently hypertrophied, the uvula

relaxed, and the pharynx the seat of enlarged follicles. The child's head being steadied with the left hand, the index finger is rapidly passed behind the soft palate, when, if the disease exists, soft velvety masses are felt on the vault and posterior wall of the pharynx. The finger on withdrawal will probably be covered with blood. In operating, the child is thoroughly etherised, and then seated on the lap of an assistant opposite a strong light, the mouth being kept open with a small-sized gag. The surgeon sits opposite, and, having assured himself of the exact position of the growths, gently draws the soft palate forwards and upwards by means of a hard rubber palate-hook held in the left hand. A pair of smallish post-nasal forceps are now introduced, closed, into the naso-pharyngeal cavity, and when the growths are felt, the blades are opened and the mass grasped and pulled off, either by direct traction or by a slight twisting movement of the forceps, in neither case employing any undue force. If the growth comes away with difficulty, the blades should be opened and a smaller piece grasped and pulled; should there be much bleeding, a pause must be made until it has stopped; this, indeed, is frequently necessary five or six times in the course of the operation. When, after several insertions of the finger, enough appears to have been removed, the child's head is held forward, so that the blood may flow through the nose, and the edges of the wound are smoothed down, and the jagged edges removed with finger, armed or not with Dalby's steel nail. The operation lasts from ten to twenty minutes, and the cure is usually permanent. Dr. Franklin Hooper has never had any accident attributable to the use of anæsthetics in these cases; the vessels of the naso-pharynx are not large, and the blood flows steadily down the œsophagus. The only possible danger is from the impaction of a clot upon the glottis, and this is easily guarded against; vomiting of food constitutes an even greater danger, and must be averted by anæsthetisation upon an empty stomach. Cases where the tongue is very large, the tonsils greatly hypertrophied, or the pharynx the seat of great mucous accumulation, are more difficult; and, in some of these, it was thought a second operation would be needed. This, however, proved not to be the case, for the remaining portion of the growth soon atrophied. It occasionally happens that the upper surface of the soft palate contracts and forms a prominence which, unless due care be taken, may be nipped by the forceps, and thus give rise to obstinate hæmorrhage. The author concludes this instructive paper by giving woodcuts of three children before and after the operation. These show very distinctly the change from the open to the closed mouth, and from the semi-idiotic to the intelligent countenance.

790. *Jacobi on the Therapeutics of Infancy and Childhood.*—In this number Professor Jacobi deals first with the treatment of the cord. He points out that when the ligature is applied immediately after cessation of the umbilical pulsation, there are still six ounces of blood left in the placenta, but, by compressing the latter, this quantity is reduced to three ounces. The benefit of furnishing this additional quantity of blood is, however, somewhat counterbalanced by the risk of serous and other hæmorrhages from over-distension of the vessels in the child. The end of the cord must be kept dry, so as to favour mummification; oil in any form is therefore inadmissible. When cicatrisation at the umbilicus is retarded, granulations sometimes spring up and form into small tumours, which, although not sensitive, are apt to bleed. In some cases they remain for years. If pedunculated, a silk ligature may be applied; otherwise the little tumour requires cauterisation or astringent and antiseptic applications.

791. *Seibert on Cerebral Paralysis in Infancy.*—Dr. Seibert begins his paper, which was read before the New York Academy of Medicine, by narrating the following case. In 1885 he was called to see an infant, 2½ months old, with capillary bronchitis. The mother stated that she felt scarcely any movement during her pregnancy with it, and that, when born, it was half asphyxiated from the fact of the cord being twice round its neck. It was small and flabby, and for two months never stirred nor cried. The other six children were all strong and healthy, and there was no history of syphilis or tubercle. At the end of ten months it was still in the same feeble condition. It lay quietly on its back, the skin was wrinkled, and the breathing was largely diaphragmatic. No craniotabes. The pupils were small and equal. The expression a vacant stare, and the head voluminous. The infant had never had convulsions. The diagnosis made was cerebral atrophy, and the cause was ascribed to the interference with the blood supply of the brain by prolonged constriction of the child's neck during fœtal life. The child died at the age of fourteen months of a second attack of capillary bronchitis, and at the autopsy the diagnosis was confirmed. In the second class of cases, which are more common than that just described, the symptoms are similar, but the atrophy is due to meningitis with exudation, arachnoid thickening, or moderate hydrocephalus. The third class of cases is due to chronic meningitis with exudation, and is characterised by incessant crying and moaning, with muscular contractures, and, sometimes, permanent opisthotonos, but there are no general convulsions. [It is open to question whether the cerebral atrophy in the first case was due to constriction of the child's neck. In the first place, this condition of the umbilical cord is very common, while cerebral atrophy is relatively rare. But, assuming that the cord remained in the position described long enough to interfere with the circulation, the result would have been venous engorgement and serous effusion, with perhaps hæmorrhages, rather than simple atrophy.—*Rep.*]

792. *Taylor on Pneumonia Crouposa a Frigore.*—In this paper, Dr. Taylor, of Cincinnati, gives an interesting account of an incident which happened at the Home for Foundlings, and which goes far to prove that cold alone is the causative agent in some cases of pneumonia, notwithstanding what has been recently affirmed of the special bacillus and the pneumococcus. In the month of December nineteen infants under a year old were in the institution with their mothers. These infants were kept separate from the foundlings proper, and slept at night with their mothers in small rooms made to accommodate either two or four. The health of these babies had been unusually good; for months there had been nothing worse than a little indigestion, or mild skin affection. On the evening of Dec. 13 the mother of H. L., a strong healthy child, 11 weeks old, went to her room, which she shared with the mother of H. H., also a strong fat child, aged 10 weeks, and found the window up and the crib of H. H. placed directly under it. The room was thoroughly chilled, as the

night was bitterly cold, and a north-western blizzard was howling through the city. The woman was sound asleep in bed. The second woman closed the window, put her baby in its crib, and retired. About three in the morning her attention was called to the condition of the other woman's infant; she therefore woke its mother, who called the night nurse. Its temperature was 103°·5, its breathing very rapid, and, as it was somewhat convulsed, it was put into a bath. The infant sank rapidly, and died twenty-seven hours from the time the window was shut. At the autopsy the lungs presented the following appearance on section:—The upper lobes both sides were intensely congested, but crepitated, and contained air; the lower lobes were of a dark-red colour, and contained no air. The diagnosis was bilateral croupous pneumonia in the stage of engorgement just passing into red hepatisation. The same day that this autopsy was made the second baby was seized with high temperature, rapid and difficult breathing, and quick pulse. On the second day dulness, with bronchial breathing, could be detected over the lower part of the right lung. The child died forty-eight hours after the supervention of the acute symptoms, and the diagnosis of croupous pneumonia of the right base was confirmed at the autopsy. The lungs were not examined microscopically, but the absence of any special bacillus or pneumococcus was inferred from the clear history in each case.

793. *Miller on the Earliest Symptoms of Hereditary Syphilis.*—Dr. Miller derives his materials for this paper from the Foundling Hospital at Moscow, of which he is senior physician. Most of the children were illegitimate, and syphilis was very common. The determination of the earliest symptoms presented great difficulties from the Protean manifestations of the disease, but this polymorphic condition itself became a valuable feature in the diagnosis. Thus a child was sometimes the subject of profuse coryza, pemphigus, fissures, rhagades, macular syphiloderm, and condylomata simultaneously. Out of a thousand children 74 per cent. presented mucous tubercles, 70 per cent. rhagades, 58 per cent. rhinitis, and 52 per cent. ulceration of the hard palate; while the percentage of maculæ was 45; of lymphadenitis, 29; of lingual ulcer, 27; of pemphigus, 25; of onychia, 23; of fissures, 20; of laryngitis, 17; and of paresis, cutaneous ulcer, and ulcerated gums respectively, 7, 4, and 4. In the great majority of cases the children were wasted. Indeed, from his long experience in the institution, the author is convinced that all children prematurely born, if debilitated at birth, must be regarded provisionally as syphilitic, and must therefore, if possible, be nursed by their mothers or brought up at the bottle, at any rate for the first two months. Out of the above thousand children only 63 were found to be of normal weight. Their atrophic condition appeared to be due to implication of the placenta, interfering with the nutrition and respiration of the fœtus. Jaundice, which is so common in all infants as to be regarded by some authors as physiological, was observed to last much longer in children prematurely born. Normal desquamation began later and lasted longer, and the appearance of syphilitic symptoms was also retarded. Moreover, syphiloderms, when they did come, were of the severer varieties, such as pemphigus. The author's statistical table shows that the first symptoms of the disease appeared during the first week in 8·5 per cent.; second week, 13·8; third week, 24; fourth week, 17·7; fifth week, 8·8; sixth week, 5·4; seventh week, 5; and eighth week, 3 per cent. At the age of two months, the children were sent into the country, and were thus lost to observation. The earliest symptoms of the affection were undoubtedly rhinitis and pemphigus; but the frequency of the former might have been due to the fact that the children were often brought hundreds of miles in all seasons and in all weathers. For this, and other reasons, coryza was regarded only with suspicion; but, if epistaxis followed, this suspicion became greater, and if the bridge of the nose fell in, the diagnosis was indisputable. Pemphigus, on the other hand, if it appeared within the first or second week was found to be almost pathognomonic, more especially if the parts affected were the palms, the soles, the fingers, or the toes. Rhagades of the angles of the mouth was a common symptom; but it was also observed in children who were not syphilitic, and was then the result either of violent screaming or of extension of thrush in wasted infants. Fissures of the lips, but more especially of the upper lips, were regarded as of more value in diagnosis, for they were not only almost pathognomonic, but they appeared early and in a large number of the cases. They originated in moist papules, which formed in the wrinkles made by the contractions of the orbicularis oris, more particularly at the junction of the middle with the two outer lobes of the lip—a division which is well marked in most sucking infants. The marks are visible for some time after the ulcers have healed, as two whitish streaks. Hoarseness was met with in 17 per cent. of the cases, but it presented no characteristic features. Craniotabes was a rare symptom; for, although some newly-born children showed parchment-like patches on the skull, these, under the nutritive influence of a good nurse, rapidly ossified over, and when they were observed in older children, they were always associated with a rachitic condition. The commonest symptom of all was a maculo-papular eruption, and in 46 per cent. this was also the earliest symptom. The lower extremities were its favourite seat. Erythema of the chin, which was considered so characteristic by Bednar, was observed just as frequently in healthy as in syphilitic infants, and therefore no value was attached to it. Onychia and paronychia occurred in 23 per cent. of the cases; and, in opposition to Parrot's view that they are due to defective nutrition and not to syphilis, they were met with in well-nourished syphilitic children. Shedding of the eyebrows and lashes as described by Barlow was not met with in a single case. Syphilitic pseudo-paralysis of the extremities occurred but seldom (7 per cent.), but was absolutely diagnostic. [The paper is undoubtedly a valuable contribution to our knowledge of the subject. The condition of the spleen does not appear to have been noted.—*Rep.*]

794. *Shoemaker on Infantile Eczema.*—The author divides the causes of this common complaint into four—insufficient or improper food, imperfect assimilation, deficient excretion, and external irritation. The first cause may affect even children who have nothing but the breast milk if this be of poor quality or scanty, or if it be otherwise altered by emotions, pregnancy, menstruation, or disease. The source of external irritation may be flannel or other woollen clothing, dyed clothes, wet diapers, light clothing, or the excessive use of soap and water.

The first step in treatment is to remove the cause. The best substitute for human milk is 'pure undiluted cow's milk unmixed with any substance whatever.' Wasted eczematous infants will rapidly gain flesh and acquire a healthy skin under this dietetic treatment alone. Cases due to malassimilation and imperfect digestion will be benefited by pepsine. The remainder of the treatment has reference to the causative agency, but arsenic, in the author's opinion, is always unnecessary and frequently injurious.

795. *Friedländer on a Case of Scleroderma with Recovery.*—The subject of these notes was a female child aged 5 years. With the exception of a slight attack of measles, she was quite healthy up to April 1886, when she had two severe frights within a few days of each other. These were followed by lowness of spirits, wasting, and loss of appetite. For these symptoms the milk cure was tried, and with good effect, as far as the nutrition of the body was concerned. Her spirits, however, continued depressed, and she seemed to have lost the power of expression. Dr. Friedländer first saw her on Nov. 8, 1886, and at once noticed that the muscles of the face were almost immovable. The mouth was contracted as if for whistling, and it could be only slightly opened; while the nose was sharp and drooping. Acute pain was complained of in the nape of the neck, where, on examination, was found a stiff infiltration of the skin, which extended to both supraclavicular regions, and thence over the pectoral muscles. The entire muscular system of the back was converted into a hard, immovable mass. The breathing was superficial, since a deep inspiration was impossible. The elbow, knee, wrist, and ankle-joints, owing to the sclerotic condition of the skin about them, were capable of only limited movement. Over the flexures of these joints the skin was pigmented. The rigidity of the skin involved also the abdomen, the buttocks, thighs, calves, arms, and forearms. The uvula, which was elongated, was also abnormally stiff. The normal skin, which was confined to a very limited area, was not separated by any well-marked line of demarcation. Sensation was somewhat diminished, but perspiration appeared normal from both sets of glands. The other symptoms were sleeplessness and loss of appetite. The treatment was directed to softening the skin, increasing tissue change, and relieving pain. The child was immersed for three hours a day in a bath of the temperature of 80° F.; skilled massage was applied to all the sclerosed parts and oil rubbed in at night, the child wearing flannel night-clothing. Iron was given internally, and highly albuminous food and fresh air were enjoined. Improvement set in gradually, and in February 1887 only a few infiltrated places remained. The same treatment was continued, and by April the cure was complete.

796. *Hirschsprung on Congenital Constriction of the Pylorus.*—The first to describe this condition was Landerer. The youngest of his cases, however, was 16 years old, and the evidence pointing to the congenital origin of the constriction consisted partly in the history of the patient, the symptoms dating from birth, and partly in the absence of any *post mortem* indication of old inflammation or ulceration. The author's cases, on the other hand, died in infancy, so that no doubt could occur. The first of these, Thora Jenkins, a well-nourished full-timed child, presented no abnormal conditions until she was 10 days old, when vomiting, accompanied by constipation, set in. Castor-oil temporarily removed the latter, but no second motion could be obtained for the next ten days, though copious enemata were administered. Nothing but a little mucus and blood passed. When 20 days old, she was admitted to the hospital, and was then small and wasted; the abdomen was soft and not prominent. Rectal exploration elicited nothing abnormal. The abdomen was next examined under chloroform, but no tumour could be felt. An enema of lukewarm water brought away nothing but a little mucus. The mother was admitted with the child, and the latter took the breast well. Vomiting was moderate, and consisted of uncoloured milk. The child slowly wasted, having occasionally passed a little yellowish excrement, and died at the age of 30 days. On *post mortem* examination, the stomach was found much distended, lying transversely, and much paler than the intestines in its neighbourhood. The latter were much contracted, and contained a small quantity of greenish mucus. The cæcum was normal; the œsophagus dilated. The stomach, which contained some milk and uncoloured mucus, was universally thickened, with well-marked longitudinal folds; the pyloric portion exhibited a cylindrical thickening about an inch long, through which a medium-sized sound was passed with difficulty. The thickening was found to be due to hypertrophy of all the layers, but in the greatest degree of the muscular portion. The second child came under treatment when 14 days old, but the symptoms were less acute. The motions, though scanty, were fæcal. The vomit, as in the previous case, was never coloured. Death, which was preceded by petechiæ and subnormal temperature, occurred at the age of 6 months. At the autopsy the stomach was found dilated, the mucous membrane smooth and pale, and, like the other coats, thickened. This thickening increased towards the pylorus, where it reached its maximum. The lumen was narrowed, but not so much as to prevent the passage of an ordinary pencil. The œsophagus was not dilated. No ulceration existed anywhere. Acute miliary tuberculosis was found in the lungs and liver.

797. *Coopmann on a Fatal Case of Pyæmia following Dental Caries.*—The patient, a boy, 8 years of age, was first seen on Dec. 10 for extensive swelling of one side of the face. On examining the teeth, a lower permanent molar was found the seat of advanced caries, and its extraction was recommended. As, however, the father objected, a simple mouth wash, and, later, a bran poultice, were ordered. Three days afterwards he had a rigor, his temperature was nearly 107° (41°·6 C.), his breath fetid, his jaw locked, and his general condition prostrate. It was not until eight days afterwards that the tooth, which was completely hollow, was removed. A quantity of offensive pus followed its extraction; but the symptoms did not abate, and two days afterwards an abscess appeared at the lower margin of the orbit and was opened. The pyæmia continued, however, and the child died three days later, with meningitic symptoms superadded.

R. W. LEFTWICH, M.D.

798. *Roulland on Multiple Abscesses in Children at the Breast.*—Bouchut attributed these multiple abscesses in sucking children to three diatheses—the puerperal, the scrofulous, and the syphilitic. Dr. Roulland rejects the hypothesis of a puerperal diathesis, and attaches but a small importance to septicæmia as a cause. With respect to syphilis, he is inclined to consider that they may have to deal with

syphilitic abscesses, but not with abscesses in syphilitic children. All these categories doubtless exist, but only as a collateral and subsidiary influence. Dr. Roulland objects to the expression 'purulent diathesis,' which he considers does not exist, but he admits the possibility of local infection by the entrance of bacilli, giving rise to multiple abscesses. A far more frequent cause is athrepsia, an infectious disease which gives rise to diarrhœa and broncho-pneumonia, &c. He maintains that there is nothing surprising in the formation of numerous abscesses, starting in the sebaceous and sudoriferous glands, which are frequently inflamed in athreptic children.

799. *Griffith on Antipyrin in Whooping-cough.*—Encouraged by Sonnenberger's successes (*see* LONDON MEDICAL RECORDER for March 20, Art. 227), the drug was given in fifteen cases of whooping-cough with excellent results. In most of the cases the good effect of the drug was promptly noticed, and the severity of the disease was overcome within from ten days to a month. He generally began with a dose of from one to three grains, according to the age of the child, increasing it if necessary. It is not a specific, but it rapidly diminishes the number and severity of the paroxysms of cough, and so helps to maintain a better standard of health than would otherwise be possible.

800. *Michael on Nasal Insufflations in Whooping-cough.*—Michael recommends a powder containing one part of muriate of quinine to three of benzoic acid. Legroux substitutes powdered gum benzoin for the benzoic acid in the proportion of eight parts to two parts of quinine. Guerder claims to have obtained good results with a powder containing equal parts of boracic acid and roasted coffee finely pulverised. Mozard precognises five parts each of salicylate of bismuth and powdered benzoin with one of sulphate of quinine. These powders are insufflated by means of a piece of India-rubber tubing.

801. *Laurencin on a Case of Chorea cured by Antipyrin.*—The patient was a child, 7 years of age, with no family history of note and without morbid antecedents. For some months past she had appeared somewhat unsteady on her legs and was less playful. On Dec. 10, 1887, the patient was stated to have lost her appetite and to be suffering from migratory rheumatic pains. She was carefully examined, and a slight systolic murmur at the apex was detected. The pulse, 100, was irregular, the movements of the feet were inco-ordinate, and this was even more marked in the upper extremities. The head also moved in a brusque and aimless manner. The child was diagnosed to be suffering from chorea; a blister was applied over the præcordia and cold rectal injections ordered with 25 grains of antipyrin in the twenty-four hours. On the 12th the *souffle* had disappeared and the pulse was regular. The nervous movements had ceased, but there was severe pain in the hips. The legs were half flexed and adducted, and could not be extended on account of the pain. Pressure over the trochanters caused pain, but there was neither swelling nor redness. The temperature was 39°. By the 15th the symptoms had all disappeared. On the 20th the child woke up with unmistakable chorea and was unable even to stand. The following day the movements were so violent that, as the mother described it, 'she twisted about like a worm cut in two.' During three days she was treated with hypodermic injections of Fowler's solution and belladonna pills. Bearing in mind the marked effect of antipyrin in different forms of rheumatism, it occurred to him to try it in chorea. From the 24th to the 31st the patient was therefore given 10-grain doses of antipyrin every six hours, when the dose was increased to 15 grains. The 10-grain doses did not produce any appreciable effect, but as soon as it was increased, her condition at once began to improve, and each dose secured a period of relative calm. By Jan. 10 the choreic movements had practically ceased, except on voluntary motion. By the 16th she was able to eat and walk unaided, and by the 21st the attack was at an end.

802. *Fredet on a Case of Tardy Infantile Syphilis with Infection of Nurse.*—A newly-born child was brought to the *crêche* of the Clermont Hospital in August last, with a certificate from a midwife that the mother and the child were both healthy and free from syphilis. The child looked healthy and was placed in charge of a wet-nurse. Three months passed without any symptoms, and the child was sent down into the country with another nurse on Nov. 11. The first nurse was a woman whose health was and remained perfect. In the following month (December) the child was brought back with ulcerated syphilides on the legs and buttocks, and condylomata on the scrotum and mouth, &c. These symptoms, according to the nurse, had commenced a month before—that is to say, soon after going into the country. The nurse had some slight ulceration on each nipple, with enlargement of the axillary glands. The most attentive examination of the woman failed to reveal anything else indicative of syphilis either ancient or recent. Under specific treatment the child's symptoms improved, and soon nothing was left but a trace of the snuffles.

803. *Comby on Rachitis and Phosphorus.*—During the last fifteen months forty children suffering from rickets were treated by means of phosphorus, their ages varying from ten months old to three years. The vehicle employed was cod-liver oil, containing two grains of phosphorus to the litre. Infants under twelve months of age took a teaspoonful daily, the dose being raised to four teaspoonsfuls for children above two years of age. The treatment, fixed at three months, was continued in some of the cases to six and even twelve months. Only the well-marked and severe cases were subjected to this treatment. Generally speaking, the children bore the treatment well, but occasionally it had to be suspended for a few days, but no symptoms traceable to the phosphorus were noted in any case. Although the results proved the allegations which have been formulated against the use of phosphorus to be unfounded, the author prefers the old method of salt-water baths, with cod-liver oil and phosphate of lime. He asserts that phosphorus is in no sense a specific for rickets, which is a malady requiring hygienic and constitutional treatment rather than medication.

ALFRED S. GUBB.

804. *Audry on Insanity in Children.*—In the *Lyon Médical*, Feb. 26, 1888, Dr. Audry describes a case of maniacal fury in an epileptic boy of eleven years. He came of a neurotic family and had fits which came on when he was two years old. Since this time he has been subject to attacks of epileptic vertigo. He was an ill-grown boy of average intelligence. On Dec. 2, 1887, he was peeling potatoes with a knife when he suddenly commenced to brandish it about. He then rose and threw himself upon some other boy, when he was mastered and carried away to his bed. In the evening he was

brought to the hospital. Next day he again fell into a fit of fury, and on Dec. 5 he attempted to strangle a little girl younger than himself. More than twenty-four hours passed in alternations of extraordinary fury and profound coma, which generally lasted about twenty minutes. During the attacks of fury he rose and danced about, tearing and biting everything he could catch hold of. We are told, however, that he respected his own fingers, which he sometimes inserted into his mouth. On Dec. 13 these fits of fury had ceased, but were renewed on Jan. 8, when he had three attacks, which each lasted some minutes. Dr. Audry quotes several other cases of insanity in children, principally from German sources. In the *Chronique* of the *Annales Médico-Psychologiques*, March 1888, there is an account of a girl of ten years old who was possessed with a fixed idea, which she could not banish from her mind, that she must kill her mother. She confessed this under great distress. The girl was nervous and irritable, and had had epileptic fits on two occasions.

W. W. IRELAND, M.D.

805. *Petczynski on Ascarides as a Cause of Intestinal Obstruction.*—Dr. Petczynski records (*Vratch*, No. 6, 1888, p. 116) the case of a girl, aged 7, in whom on the second week of enteric fever there suddenly appeared a painful and tender cylindrical swelling in the region of the splenic bend of the colon. Simultaneously her bowels ceased to act regularly. As constipation could not be removed by castor-oil, while, on the other hand, ascarides had been found in her stools on two occasions during the present illness, Dr. Petczynski administered santonine with calomel. A bundle consisting of twenty-two living round worms was soon discharged, after which the swelling disappeared, and regular intestinal action was restored.

806. *Vakülovsky on Two Cases of Numerous Ascarides.*—In the *Meditzinskia Pribavlenia k'Morskomü Sbornikü*, December 1887, p. 483, Dr. Nikolai N. Vakülovsky, of Cronstadt, details two remarkable cases of helminthiasis in little children. In a boy, aged two years and one month, there appeared a constant diarrhœa, which persisted in spite of the treatment by various usual remedies. On one occasion two round worms were found in the boy's stools. Santonine was at once administered after the following formula: [℞ Santonini puri gr. j.; pulv. radic. rhei, sacch. albi., āā ʒss. M. f. pulv. Div. in dos. 10.] As many as 141 ascarides (a hundred of which measured from twenty to forty centimètres in length) were discharged during the day, the number of the powders taken being only three. Diarrhœa rapidly ceased and never returned. In another case, referring to a girl of three, who had been frequently suffering from convulsions, and, of late, from diarrhœa, a round worm was coughed out one day. Three santonine powders (as in the former case) expelled 206 ascarides in the course of about twenty-four hours. Both diarrhœa and convulsive fits disappeared after the treatment, the girl remaining quite well a year later. The writer draws attention, 1, to the fact that very small doses of santonine prove fully effective; and 2, to an apparent connection existing sometimes between intestinal worms and eclamptoid fits. In conclusion, he states that, according to some observations of his, all persons (children and adults alike) suffering from round worms show a pronounced disposition to sea-sickness. [International literature contains several far more striking instances of numerous ascarides in one host. Thus Volz (*Schmidt's Jahrbücher*, vol. i. 1845, p. 38) saw, in a girl of twelve, upwards of 900 worms escaping during four weeks; Fauconneau-Dufresne's patient (a boy of twelve) discharged as many as 5,126 ascarides in the course of three months (not 'in three years,' as given in the source adduced in Dr. R. Neale's *Medical Digest*, sect. 936, 1), &c. Professor Samuel, of Königsberg, asserts even (in his well-known handbook of general pathology) that 'enormous numbers of ascarides in a host are observed fairly frequently.'—*Rep.*]

V. IDELSON, M.D.

REVIEWS.

ARTICLE 807.

The Baths and Wells of Europe, &c. By JOHN MACPHERSON, M.D. Crown 8vo., pp. 373. London: Edward Stanford. 1888.

THIS work has long been a very useful one to the practitioner, and doubtless will continue to be so in the new edition. While its general character is unchanged, we observe that there are a considerable number of omissions and additions. A great many more health-resorts are mentioned in this issue than in the last one. Of course a work of so brief a character cannot be exhaustive, but there is as much said about the principles of balneology—including hydrotherapeutics, Turkish baths and massage—as a layman or an ordinary practitioner will care to read. The main feature of the book, its critical and comparative character, was on its first appearance recognised by medical journals. Dr. Flechsig, in Schmidt's *Jahrbuch*, remarked that 'the author understood how to form for himself judgments with unmistakable impartiality, and to separate what is really good from what is false show.' It does not appeal to the morbid tastes of invalids, and, being written on such lines, can scarcely show enthusiasm or supply detail enough to satisfy the zealous advocates of particular spas, who must look in it only for a notice of the most salient features of the places referred to.

In a work of this kind, which deals with such a variety of localities, many of them in out of the way nooks of Europe, one cannot expect absolute correctness, and no doubt inaccuracies may be discovered. Such as we have observed are not of much importance.

Then in questions of the value of health-resorts there will always be differences of opinion. The author does not seem to think so much of Niederbronn as does Mr. Childers in his recent paper on that place, like many who are enthusiastic about stations that are new to them. Nor evidently does he think so highly of Davos and the Engadine in some respects as many medical men, while we should say that he perhaps makes too light of the fevers of Rome and of Naples, and we could add to the list of such criticisms.

Nevertheless, we believe that this text-book of the subject will prove as heretofore a ready aid to the physician, and a valuable supplement to Murray, Baedeker, and other guide-books which, though giving every information on another class of subjects, do not meet the special wants of travellers in the selection of health-resorts.

ARTICLE 808.

Traité Pratique d'Antisepsie appliquée à la Thérapeutique et à l'Hygiène. (Médecine, Chirurgie, Obstétrique.) Par les Drs. LE GENDRE, BARETTE, et LEPAGE. *Première partie. Préliminaires—Généralités. Deuxième partie. Antisepsie Médicale.* Par le Docteur PAUL LE GENDRE, Chef de Clinique adjoint des Maladies des Enfants à la Faculté. Paris: G. Steinheil, 2 Rue Casimir Delavigne. 1888.

THIS work has for its object the exposition of the relations which the progress of bacteriological studies and of antiseptic doctrines must necessarily have on those branches of practical medicine which fall under the denomination of Therapeutics and Hygiene.

This large volume of nearly 500 pages is but the first instalment of the work which the authors propose to publish, and is devoted to the consideration —first, of certain preliminaries and generalities; and, secondly, to the development of 'Medical Antiseptics' (*Antisepsie Médicale*), or the application of antiseptic doctrines to medical treatment. This part of the work is undertaken by Dr. Paul le Gendre; the parts which have yet to appear will be devoted to Antiseptics, as applied to Practical Surgery, by Dr. Barette, *Chef de Clinique Chirurgicale à la Faculté*, and to Obstetric Practice, by Dr. Lepage, *Ancien Interne des Hôpitaux et de la Maternité de Lariboisière.*

The first chapter of the present volume deals with microbes generally, and of the part they play in the production of disease. The second chapter treats of antiseptics in general, their relative value, and the various methods by which they may be applied; also of the hygienic precautions that are necessary on the part of medical men and nurses.

These two chapters form the first or preliminary part of the volume.

The second part, 'Medical Antiseptics,' is composed of seven chapters and an appendix, in which the following subjects are examined and discussed:—Antiseptic treatment of cutaneous affections, such as erysipelas, lepra, lupus, &c.: of diseases of the mouth and pharynx, stomatitis, tonsillitis, diphtheria, &c.: of the respiratory passages, as ozæna, whooping-cough, catarrhal diseases, tuberculosis, &c.: of the alimentary canal, as poisonous foods, dilatation of stomach, typhoid, dysentery, diarrhœa, &c.: of serous and synovial sacs: of the blood, &c.

It will be seen that a vast number of important subjects bearing on the practice of medicine are here passed in review and examined, and an attempt is made to establish on a logical basis the proper position of antisepsis in medical therapeutics.

J. BURNEY YEO.

ARTICLE 809.

The Sectional Anatomy of Congenital Cæcal Hernia. By E. H. BENNETT, M.D., and D. J. CUNNINGHAM, M.D. London: H. K. Lewis. 1888.

A MALE subject with a large inguinal hernia, having come into the possession of the authors, they determined to take the opportunity of making a series of transverse frozen sections through the region affected. The hernia proved to be congenital, and the portions of the gut involved were the cæcum, vermiform appendix, ascending colon, and a considerable portion of the lower end of the ileum, with a mass of mesentery.

The work is enriched by a series of beautiful plates, which will be of great value to the anatomist even more perhaps than to the surgeon, and which reflect the greatest credit upon those concerned in their production.

One of the most interesting points brought out is in relation to a pouch of peritoneum which lay upon the outer side of the hernia, and which, ending blindly below, tapered upwards to a fine point, which was quite separate from the parietal peritoneum. Behind and to the outer side of this pouch was placed a narrow but strongly fasciculated band of involuntary muscular tissue, which passed upwards upon the upper and posterior aspect of the ascending colon as high at least as the lumbar region. Rapidly expanding as it ascended, at the level of the crest of the ileum it had acquired a width of 2½ inches, and enveloped half of the circumference of the colon. This band the authors look upon as the hypertrophied remains of the gubernaculum testis, and its interest is much heightened by its relation to Professor Lockwood's views with regard to the causation of infantile and congenital hernia. The authors believe that the sac above alluded to owed its origin to the tractive power of the involuntary muscular fibres, its connection with the abdominal cavity having been cut off after it had been drawn down. The testicle was placed well down in the scrotum, so that there was no evidence of any failure in its transit. On the contrary, the great development of the gubernaculum seems to point to an excess of activity, which fault, as the authors remark, 'has its essence in the displacement of the peritoneal fossæ on the right side, with their contents, bodily, into the scrotum.' The names of the authors of this work are sufficient, without any commendation on our part, to show that it is well worthy of study by anatomists and surgeons. BERTRAM C. A. WINDLE, M.D.

ARTICLE 810.

A Manual of General Pathology. By J. F. PAYNE, M.D., F.R.C.P. London: Smith, Elder, & Co. 1888.

WHETHER another manual of pathology is a necessity at the present day is a question which certainly might be one for debate, but it is fortunately not one with which we are called to deal in this review. Our duty is to take the book as presented to us and examine into its merits as it stands. As regards the style in which it is brought out we have nothing but praise to give; it is well printed; the different sub-divisions are marked off distinctly; the illustrations, taking them all round, are good, and the text appears to be very free from typographical errors.

In considering the matter it may first be remarked, as the author himself admits in the preface, that the work is one in which pathology is looked at more from its medical than its surgical aspect. With this, which is probably in part at least due to the branch of the profession in which the author is chiefly interested, we have, however, no cause for quarrel. Surgical pathologies we have in sufficient number and of varied excellence, and it was quite time that one should appear written for students from the medical standpoint. As a student's manual, for that is its aim, we believe that the book will be found very useful; it appears to be well up to date, and the information given, whilst not of that encyclopædic nature which appeals to those making a special study of the subject, is clearly set forth,

and amply sufficient to afford a sound scientific knowledge to students of medicine. Part I. deals with the Processes of Disease, and contains, amongst other things, an excellent chapter on Fever likely to be of peculiar value to students of medicine. In this section the tumours are also considered. Part II. is the portion of the book which perhaps differs most from other kindred works, since in it the Causes of Disease meet with a fuller consideration than is generally accorded to them. Herein is given an account of the animal and vegetable parasites of the body, in which the recent researches in the latter field especially are carefully described. Marjolin's first piece of advice to students of anatomy was to choose a good author, and those medical students who take Dr. Payne as their guide in general pathology will not, we think, have any reason to regret their selection.

BERTRAM C. A. WINDLE, M.D.

ARTICLE 811.

A Text-Book of Physiology. By J. G. MCKENDRICK, M.D., LL.D., F.R.S. Vol. I., *General Physiology.* Glasgow : James Maclehose & Sons. 1888.

THIS work, of which the first volume is now before the public, is not to be looked upon as a new edition of the author's *Outlines of Physiology*, but as a complete treatise upon the subject of which it treats. It commences with an Introduction, which deals with the Nature and Objects of Physiology, Matter and Energy, and the General Principles of Biology.

The Chemistry of the Body forms the next section, in which, *inter alia*, is to be found a very complete account of the pigments of the body largely based upon the well-known work in that field of Dr. MacMunn, and which has been revised by that writer, who has prepared a coloured chart of spectra, which forms the frontispiece of the volume.

The third section comprises the Physiology of the Tissues, and commences with an historical introduction, in which much stress is laid upon the recent developments in connection with the cell and its composition. The origin of the tissues having been considered, the next chapter, one of the most interesting in the book, discusses the theories as to the Physiological Basis of Heredity.

The microscope and the methods of microscopical research are next described, and here, as elsewhere, the text is supplemented by numerous and excellent illustrations. The portion dealing with methods is supplemented by an appendix, in which is given a number of special methods for making histological preparations, each numbered, so as to be readily referred to throughout the body of the book.

The structure of cells and cellular tissues and of the connective tissues comes next, and here we may remark that the histological illustrations are from electrotypes of the wood-cuts in Stöhr's *Lehrbuch der Histologie*, part of which work is incorporated with that now under review.

Sect. 4 deals with the contractile tissues, in connection with which the apparatus and the methods concerned in the study of this subject are described, electrical apparatus receiving considerable attention. The concluding chapter of this section and of the first volume is concerned with the phenomena of the electric fishes, which are discussed at considerable length.

We have thus given our readers an idea of the scope of the volume already issued, and the name of its author will be sufficient guarantee for the way in which the subjects which it comprises are dealt with. The author in his preface states that he has 'not endeavoured to give anything like an encyclopædic account of the modern researches that have built up the physiological science of the present time, but rather to weave into a consecutive narrative the main facts and principles of physiology, as these present themselves to my mind, after nearly eighteen years of experience as a teacher of the science.' Constructed with such an object in view, it may readily be understood how valuable this book will be to those workers in the natural sciences, who, not being physiological specialists, are yet obliged constantly to seek for accurate information upon some point in that subject. We shall look anxiously for the second volume, which is, we are glad to learn from the preface, already in the press, and have no doubt that if it sustains the high level of its predecessor, the book, as a whole, will take its place in the first rank of physiological text-books.

BERTRAM C. A. WINDLE, M.D.

ARTICLE 812.

The Treatment of Hæmorrhoids by Injections of Carbolic Acid and Other Substances. By SILAS T. GOUNT, M.D., Physician to Saint Elizabeth's Hospital, Member of the American Medical Association, &c., &c. Lafayette, Ind. : The Echo Music Co., Printers. 1888.

THIS is the second edition of a little work, the author of which advocates the injection of weak solutions of carbolic acid as a comparatively painless and quick and sure method of treating internal hæmorrhoids. This is not claimed as an original plan of treatment, but the dangers of abscess and sloughing that have hitherto attended its application are described, and suggestions are made by which such evil results may possibly be avoided in future. Dr. Gount has evidently had much experience of rectal surgery, and his remarks on the general management of cases of hæmorrhoids may be found of some practical value. The book is likely to be of service to practitioners who have not acquired any extensive or special knowledge of the subject, and certainly will be found amusing as well as instructive.

ARTICLE 813.

Deviations of the Nasal Septum : their Etiology and Treatment. A Lecture delivered at the London Throat Hospital. By GEORGE STOKER. London : J. & A. Churchill. 1888.

IN this brochure of 24 pages Mr. George Stoker gives a brief but clear account of the diagnosis, symptoms, and causes of deviations of the septum, following it by a more full description of the methods of treatment to be employed in these cases. His division of the deviations, which he illustrates by diagrams, is as follows :—1, Angular ; 2, curved ; 3, sigmoid ; 4, dislocations (so-called) ; 5, spurs, adhesions, and exostoses. He expresses his opinion that dislocations are never complete, and without doubt, as he says, many cases of cartilaginous spurs near the floor of the nose have, on superficial examination, the appearance of dislocations. Congenital deviations he attributes in many cases to difficulty in passage of the child during parturition, or to the careless application of forceps. Full

directions are given for the treatment of the nasal catarrh often coincident with, though not always consequent on, deviations. We are unable to agree with the author when he disapproves of the removal of hypertrophied tissue from the turbinated bodies when it co-exists with septal scoliosis. It seems to us reasonable, and is practically useful, in cases in which the two conditions co-exist, to remove any thickening of the mucous membrane on the turbinated body first, in order if possible thus to restore the lumen of the nasal passages sufficiently without having recourse to the more serious operation on the septum. In conclusion, the author lays stress on the importance of attending to trivial accidents to the nose in childhood, in order to prevent grave after-results.

This lecture, which deals with an important subject in a clear and practical manner, is, we regret to say, disfigured by several misprints, such as 'annointed,' 'speculi,' 'sniff a breathe,' &c., which could easily have been avoided with a little care. E. CRESSWELL BABER, M.B.

NOTES ON BOOKS.

ARTICLE 814.

An Introduction to the Study of the British Pharmacopœia. By RAWDON MACNAMARA, Professor of Materia Medica, R.C.S.I., &c. London: H. K. Lewis. 1888.

THIS tiny publication contains a large amount of information which will be useful to men commencing the study of pharmacy and Materia Medica, and it is couched in a pleasant chatty style which relieves the intrinsic tediousness of the subject. The scope of the work only covers the 'rudiments,' but, as far as it goes, it is reliable and complete.

ARTICLE 815.

La Pathologie et Traitement du Choléra Sporadique et Epidémique.

THIS *brochure* is the French translation of a paper read before the Ulster Medical Society by Dr. Alexander Harkin. The translation is evidence of the author's desire to popularise *urbi et orbi* his new method of treating cholera, whatever its type. His treatment has at any rate the merit of simplicity, consisting as it does merely of the application of a blister behind the ears. The theory on which it is based assumes that the intestinal symptoms are due to hyper-activity of the sympathetic nervous system. The effect of the counter-irritation is said to be to stimulate the pneumogastric centres, the inhibitory action of which serves to check the activity of the sympathetic. Two cases are given in which the application procured immediate cessation of the symptoms and a speedy cure.

STATISTICS OF THE PASTEUR INSTITUTE.—During the month of May 161 persons were treated for dog-bites. In forty-five the existence of rabies in the animal was demonstrated by laboratory experiments; in ninety-seven the animals were certified to be rabid by veterinaries, and fourteen were bitten animals suspected to be rabid. Two of the whole number proved fatal. In both these cases the wounds were very severe and involved the face. They came under treatment two and five days after infliction of the respective injuries.

NEW INVENTIONS.

A NEW UTERINE DILATOR.

DR. DUKE, of Dublin, having experienced the want of a rapid uterine dilator either for exploration of the cavity for diagnostic purposes, as in cases of hæmorrhage, &c., or to obtain more room for the application of curette or *écraseur* wire, has been led to design an instrument for the purposes enumerated which will, in his opinion, contrast favourably with those already in use.

Hegar's and Tait's instruments, though simple in design and possessing the advantage of cleanliness, are very slow in action, and require the introduction of a considerable number before sufficient room is gained; and Tait's possesses another disadvantage—namely, that of slipping into the uterine cavity altogether when used in cases when the body of that organ exceeds the normal size.

The shape of Dr. Duke's dilator being conical like Tait's, but curved (in which it differs from his), makes it, he finds, easier of introduction by touch alone, and combines with this the additional advantage of divarication to the extent necessary to open the cervical canal sufficiently to admit the finger for exploration, one instrument thus doing the combined work of a number.

The cervix being steadied by either tenaculum hook or volsellum, five drops of a 10 per cent. solution of cocaine is injected into the tissue at either side of the os, the needle being made to penetrate for half an inch at least. When sufficient time has elapsed for the absorption of the cocaine, the point of the dilator, warmed and oiled, is then slowly introduced, either by touch alone (which the inventor prefers) or by sight, the duckbill speculum affording a good view. The dilator being made to penetrate by boring action till past the inner os, the screw at the end of the instrument is slowly turned, as when using the *écraseur*, steadying the dilator by holding the cross-handle at the side, and judging of the amount of force necessary to be used by the resistance offered to the turning of the screw.

When the dilator is expanded to the required extent, it should be allowed to remain quietly for a minute or so, when the screw can be rotated in the opposite direction, when the blades will close by spring action, and, if preferred, they need not be allowed to close altogether before withdrawing the dilator from the cervix; thus the dilatation of the entire canal from within outwards can be secured.

Very slight bleeding, as a rule, follows the operation, and a camel-hair pencil, charged with a saturated solution of alum in glycerine, is found by Dr. Duke to be the cleanest styptic. Turpentine can also be used with advantage, but he strongly objects to iron, as it hides the source of bleeding, and by forming clots gives rise to subsequent trouble.

Dr. Duke can generally obtain the full amount of dilatation necessary for the introduction of the

finger in from ten to fifteen minutes, and thus avoid the frequent introduction of a number of dilators. Should he wish to keep the cervical canal patulous, either for drainage or subsequent exploration on another occasion, he introduces one of his large-sized, spiral, wire stems, which he finds so useful for preventing the contraction of the cervical canal after the operation of division of the os and cervix for stenosis.

The dilator can be easily cleaned by being whisked through hot water after use, or a brush applied while the blades are fully expanded.

The makers of both dilator and stems are Messrs. Arnold & Sons, West Smithfield, London.

A NEW TEA INFUSER.

WE append an illustration of a new vessel for making tea for domestic use which is in reality a small tea urn. It is the invention of the Patent Tea Urn Company, Falcon Works, Hackney Wick. The idea of the inventor is not altogether new, but is new in its application, and apart from its advantages in making a good cup of tea, it will be appreciated by ladies as obviating the necessity of constantly lifting a teapot for pouring out the tea. The new tea-urn is made in earthenware, Britannia-metal, and electro-plate, and is at present only manufactured in sizes up to that of the largest teapot.

The illustration shows a portion of the exterior cut away. The outer lines represent a thickly-padded cosy, which fits tightly to the upper portion of the urn. On removing the lid a perforated wire basket is discovered resting upon supports, of which there are three, to be used according to the quantity of tea to be made. The tea is placed in this basket and the boiling water poured upon it in the usual way, and the basket must be placed at such an altitude that the water must come up to the top edge. When seven or eight minutes have expired it is ready for use, and by drawing off the first cup by means of the tap the liquor is brought below the level of the basket and further contact with the tea-leaves is prevented. If the tea is not required for immediate use, the basket should be removed to a level out of contact with the infusion, or, if at the top level, be removed entirely. By placing the cosy over the urn the tea is kept hot for some hours. The object of this invention is to prevent the extraction of the tannin or deleterious property of tea. If it be effected, one of the principal physiological objections to the use of tea by persons of delicate digestion will be removed.

AN IMPROVED SPLINT FOR THE ELBOW-JOINT AFTER ITS EXCISION.

IN the *Lancet*, June 1888, p. 1135, Mr. Bour describes a new splint for the treatment of the elbow-joint after excision. It allows passive extension, flexion, pronation, and supination of the forearm to be performed whilst the limb is fixed to the apparatus; at the same time side-to-side movement is checked. It consists of a concave armpiece joined to the fore-arm piece by a hinge-joint, which can be tightened by a winged screw. The forearm piece is made out of two parts, simulating respectively the ulna and radius. These two pieces are so arranged by means of screws that they can simulate the movements of the forearm, and it can be fixed in any position desired. The apparatus is applied over the dressing to the inner aspect of the limb, and is kept *in situ* as an ordinary rectangular splint by means of bandages. The instrument is made by Messrs. S. Maw, Son, & Thompson, of Aldersgate Street, E.C.

NEW PREPARATIONS.

SULFONAL RIEDEL.

WE have received from R. W. Greeff & Co., 29 Mincing Lane, E.C., a sample of the 'Sulfonal Riedel,' the new hypnotic derived from mercaptan. It is remarkably pure and free from taste and smell, and in doses of from thirty to forty grains produces a quiet sleep free from disagreeable after consequences. It is soluble to the extent of about 1 per cent. in water, and the absence of taste and smell render it an agreeable substitute for chloral.

A CORRECTION.

MESSRS. BURGOYNE, BURBIDGES, & CO., the agents for Messrs. Chassaing, write us in reference to the notice of *Poudre Laxative de Vichy*, in the LONDON MEDICAL RECORDER, of June 20, p. 272: 'Permit us to observe that the writer of the notice in the LONDON MEDICAL RECORDER is mistaken as to the composition of "Vichy Laxative Powder." The name of Vichy has been given to this powder (composed of vegetables and non-drastic substances), because the inventor, Dr. Souligoux, is a medical practitioner at Vichy, and it was at Vichy that the formula was first prescribed, but there is no Vichy salt in its composition; Vichy water is not laxative, therefore it cannot obtain the same results as Chassaing's "Poudre Laxative de Vichy."'

MESSRS. BURROUGHS, WELLCOME, & CO. have been awarded a First Prize Medal for their Digestive Ferments and Invalid Food Preparations, by the Sanitary Institute of Great Britain.

The London Medical Recorder.

ARTICLE 816.

SEMMOLA ON THE PATHOGENIC CONDITIONS OF ALBUMINURIA.*

EXPERIMENTS which cause albuminuria help to explain the mechanism of its occurrence in disease. Unfortunately these experiments are usually made by observers with preconceived opinions, and to increase the confusion which at present exists, the conception of a 'physiological albuminuria' has been foisted into scientific literature. 'Although I was the first to observe this kind of albuminuria (*Sitzungsbericht des Congresses zu Brüssel*, 1875, also Charcot, *Leçons sur les conditions pathogéniques de l'albuminurie*, Paris 1875), I have always considered it incorrect to apply to it the term "physiological," even though the person affected may be apparently healthy. Albuminuria represents disturbance of the normal functions of the body, in whatever way it occurs. Like sugar, albumen circulates in the blood as an internal product destined for internal consumption, and never for excretion, during health.' But the author showed as far back as 1861 that albuminuria might exist without the slightest affection of the kidneys (*Gazette des Hôpitaux*, No. 101, 1869). Since 1879, his investigations have been mainly directed towards the following three factors regulating the renal functions :— 1. The mechanical conditions of the circulation. 2. The physical and chemical composition of the blood. 3. The histological anatomy of the kidney. The endeavour was made, first, to ascertain by experiment the influence of these three factors upon the excretion of albumen, and second, to apply this knowledge to pathological cases, so as to explain the spontaneous appearance of albumen in disease.

'In all my earlier works (from 1850 to 1886) I endeavoured,' writes Professor Semmola, 'to point out the pathogenetic relation between albuminuria and the chemico-molecular constitution of the albuminoids of the blood, because my first experiments on the subject had taught me the great influence of nitrogenous food upon the amount of albumen excreted in Bright's disease. I was led to the conclusion that kidney disease must not be regarded as the original cause of the albuminuria, which was essentially due to some alteration of the albuminoids of the blood, rendering them dialysable and unassimilable, and therefore to be rejected from the system as soon as possible. Their excretion must be regarded as providential (in Bright's disease). . . . Whether the series of changes in the blood is due to some albuminoid from the food, whether the sodium chloride is in excess, whether there is simply too much water present, or whether, lastly, some poison is introduced from without or elaborated within the organism, the kidneys pursue their function, viz., to remove all useless and injurious matters from the blood.' The view adopted by the author since 1850, that albuminuria may exist without any histological alteration of the kidneys, has met with the keenest opposition. Some mysterious process or other is continually evoked to explain the so-called physiological albuminuria. For a long time it was an axiom that this latter could not occur unless the glomerular epithelium was destroyed, more or less. More recently Leube attempts to explain it by the greater or less porosity of the glomerular membrane, and by the resistency of the epithelium. 'I cannot make out the *raison d'être* of such hypothesis, so repugnant to sound physiology in an epoch when pathology is establishing itself as an experimental science. What is meant, scientifically speaking, by assuming the greater or less porosity of a membrane?' Such an assumption is contrary to physiology. The kidney clears off, as far as it can, everything heterogeneous to the system, and pathology, pharmacology, and toxicology all reveal its beneficent functions. When functionally overworked the kidneys like other organs become hyperæmic, and may go on to inflammation, but it cannot be granted that their porosity and permeability are altered for any one substance more than for another. The author showed in 1850, that when we attempt to replace the albumen lost in Bright's disease by a more albuminous diet, the only result is that more albumen is excreted, while the blood remains as hydræmic and poor in albumen as before. A clinical and therapeutical work on this subject is promised by him, but the object of the present article is the study of the pathogenesis of albuminuria as regards two factors, viz., the blood-pressure and the histological alterations of the kidney, which are regarded as frequent causes.

I. *Increased Blood-pressure in the Kidney.*— Some observers do not hesitate to ascribe albuminuria to this cause, but experiments by various people have yielded contradictory results. Important experimental operations (on animals) which cause collateral derangements of various functions, can never be relied on to explain any single process, hence the inconclusiveness of the experiment of tying the abdominal aorta, or even of the injection of water into the blood. In the latter case the blood-pressure is no doubt increased, but such a procedure must also alter the molecular condition of the albumen of the blood. No convincing experiment has yet been made, proving that increase of blood-pressure alone can cause albuminuria. Further, many patients with heart-disease and congestion of the viscera show no albuminuria during life, while *post mortem* a cyanotic condition of the kidneys and even interstitial nephritis have been found without the occurrence of the least trace of albuminuria before death. Other patients again with the same heart-disease and venous stasis, have albuminuria. If this exists to a high degree, relief of the stasis will never perfectly remove it. There is in fact a remarkable variability about albuminuria in heart cases. 'Some distinguished clinicians assume that the renal epithelium is affected, but it has yet to be shown what relationship this or that nutritive alteration of the epithelium has to albuminuria ; it remains at present, like Leube's hypothesis of porosity, a mere hypothesis.'

Professor Semmola adopted a new mode of experiment in the production of increased blood-pressure, viz., by transfusion of blood from one animal into another ; the pressure being measured before and after each operation. The object aimed at was thus secured without complications. Several such operations were made in the spring of 1887, the urine analyses being made by Dr. Gauthier, Professor Sem-

* *Deutsche med. Wochensch.*, 1888, No. 21.

mola's assistant. The results were, that simple increase of blood-pressure from transfusion caused no albuminuria, but the injection of dead blood set up albuminuria to a striking degree, while the increase of blood-pressure was not so high. In the latter case it is plain that the albumen introduced was heterogeneous, a thing to be got rid of by the kidneys as soon as possible. Moreover, this functional effort of the kidneys caused secondary irritation of these, as shown by further examination of the animals (dogs), which confirms the author's theory of the hæmatogenous or dyscrasic character of albuminuria in Bright's disease, a theory advanced by him many years ago.

To apply clinically these experimental results. We are no longer surprised at the absence of albuminuria in some cases of heart-disease with pronounced venous stasis, because a mere rise of blood-pressure is not enough to cause albuminuria. In other cases of heart-disease in which albuminuria is only lessened, not abolished, by relief of the stasis, it is evident that albuminuria of dyscrasic origin was present in these cases before the rise of blood-pressure occurred in the kidney. Proof of this is twofold, clinical and experimental. As a clinical proof, the author has collected forty-five cases of aortic or mitral insufficiency with albuminuria, in all of which compensation was perfect, 'nor was there any symptom of kidney disease.' The experimental proof is as follows. A dog was fed moderately for some days, and the urine was normal. Sixty grammes of egg-albumen were then injected daily for some days; albuminuria ensued a few hours after the first injection, and after ten days the dog excreted 3·5 grammes in twenty-four hours. Transfusion was then performed from a healthy dog, so as to cause a great rise of blood-pressure, upon which the albumen excreted amounted to 6·2 grammes—*i.e.* almost twice as much as before. The increased pressure mechanically assisted the albumen excretion. So in heart-disease a rise of pressure from venous stasis may facilitate albuminuria when the specific dyscrasic condition of the albumen of the blood already exists, not otherwise. Professor Doleris, of Paris, has remarked to the author that the albuminuria of pregnancy affords a striking illustration of his theory. There is here always a great rise of blood-pressure, but albuminuria only seldom results. In a work about to appear shortly the author declares that the exclusive use of milk is the only way to get rid of albuminuria altogether, except when the kidneys are directly affected. Milk is the most precious article of food, and a truly curative agent in all disturbances of nutrition, as being of all foods the most homogeneous and assimilable.

II. *Albuminuria in Relation to Renal Alterations.*—We have now to study the influence of histological alterations of the kidney upon its function as a filter. This is very important clinically, because erroneous views have prevailed and still prevail on this subject, and treatment has been based upon these views. It has been held as a *sine quâ non* that some anatomical kidney alteration, epithelial or otherwise, must underlie every case of albuminuria. Albuminuria has even been regarded as synonymous with nephritis, and the treatment adopted shows how difficult it is to eradicate superstitions and errors from the medical mind. The time-honoured, useless, and ridiculous prescription of gallic acid is still a favourite with many. The fact is that albuminuria may exist without the slightest kidney alteration, as the author claims to have shown experimentally in 1850, and as nearly all pathologists now believe. Charcot's well-known work on this subject (Paris, 1880–81) is based on the author's views. These are strongly confirmed by the fact that renal alterations are often discovered *post mortem*, from simple epithelial lesions to interstitial nephritis, while during life there has been no trace of albuminuria.

The author caused nephritis experimentally by cantharidin. Acute poisoning was first effected, and the experiments were then repeated with chronic poisoning. A dog received an injection of cantharidin (0·05 grammes); the urine was bloody in an hour, and the dog died in three days of acute nephritis. Amongst other effects, the destruction of the glomerular epithelium was very marked, being almost complete in some cases; the tubular epithelium was not affected so much; the tubules held an amorphous substance. Yet the quantity of albumen during life had been very slight, showing that it does not depend upon the amount of kidney change. Chronic poisoning shows this even more convincingly. The albumen never exceeded 0·7 or 0·8 grammes *pro mille*, and this was accounted for by inflammatory exudation, although extensive epithelial destruction was revealed after the death of the animal, together with a hyaline substance (exudation) in the tubules. Now in Bright's disease the albumen is never less than 5 or 6 grammes per cent. (by Bright's disease the original clinical type is referred to). The above experiments teach us, besides the fact that there is no causative connection between epithelial alterations and albuminuria, that we must divide albuminuria into two kinds—hæmatogenous and nephrogenous. The physical differences of these were indicated by the author in the *Gazette des Hôpitaux*, 1861, and were then investigated by Boucher, Jaccquoid, and others. Hæmatogenous albumen is simply the dialysed albumen of the blood, the nephrogenous kind is related to inflammatory exudation, and is the result of nephritis. There are three characteristic distinctions between these two kinds of albuminuria:—

1. *The Amount.*—The hæmatogenous variety is always considerable in amount, the other always scanty.

2. *The Chemical Behaviour.*—The former answers to all the tests of blood-albumen, the latter does not; in particular, it does not give a violet-red coloration when added to a solution of cupric oxide and potash. Their solubilities are also different.

3. *The Presence of formed Elements in the Urine.*—This is a marked feature of the inflammatory (nephrogenous) kind, whereas such elements are either wanting altogether in the hæmatogenous kind, or else when present do not increase when the albumen excreted is increased by a more albuminous diet. This diet-test is the true 'proof-stone' between the two varieties.

The above remarks may be summed up in the following theses:—Albuminuria results from a dyscrasia of the albumens of the blood, rendering them unfit for assimilation.

The so-called 'physiological albuminuria' is really hæmatogenous, and, strictly speaking, pathological.

Increased blood-pressure alone cannot cause albuminuria, but it may facilitate it.

Renal alterations cause albuminuria only when

they are the result of inflammation. In merely nutritive lesions (*e.g.* amyloid kidney) the albuminuria is not caused by these, but by the general nutritive changes, of which the kidney lesion is the result. The comparative studies of various kinds of albuminuria (due to syphilis, uric acid, alcohol, chronic metallic poisoning, &c.) teach this fundamental truth most forcibly.

Professor Semmola's work on this subject, to be published shortly, will be awaited with the highest interest. E. J. Edwardes, M.D.

Article 817.

CIMBALI ON PRIMARY TUBERCULAR PERITONITIS.*

For a long time after the discovery of the tubercle-bacillus there was a most widely-spread tendency to regard it in much the same light as the anthrax-bacillus, and to consider that when once introduced into the body it was certain to produce tuberculosis. In the *Lancet*, November and December 1885, after comparing the very different course of tubercle in the various lower animals, and also the great range of variation even in the human subject, I advocated the importance of some change in the nutrition or vitality of the tissues to render them a suitable soil for the growth of the bacillus. It is from this point of view that Dr. Cimbali discusses the action of tubercle-bacilli in tubercular peritonitis. He describes at length three cases.

The first relates to a soldier, aged 24, who had a slight attack of cholera in September 1884, and in the following February fell ill with abdominal pain and gastric disturbance. He gradually grew worse, had a high temperature, and all the symptoms of an acute peritonitis. In about a month the temperature fell, and remained normal for another month, during which the abdomen gradually became greatly distended with fluid. At the necropsy tubercular peritonitis was found, but no tubercle in any other organ. The author calls attention to the previous attack of cholera as a possible predisposing cause of the localisation of the tuberculosis in the abdomen.

The second case was that of a man, aged 27, whose illness began about two months before admission with general weakness, loss of appetite, and a feeling of weight in the abdomen. The latter was distended, and the superficial veins were much enlarged. Eventually ascites developed, but the temperature remained normal. Thus the case presented much resemblance to atrophic cirrhosis of the liver. At the necropsy, however, tubercular peritonitis was found without tubercular affection of any other organ.

In the last case, a lad of 18 presented symptoms of peritonitis, and after a few weeks recovered sufficiently to return to work. After an intermission of six or eight weeks the old symptoms returned, and he died of tubercular peritonitis. The necropsy showed that the tubercle was confined to the peritoneum.

Tubercular peritonitis, secondary to tubercular affection of some other organ, is of frequent occurrence, and the discovery of the primary lesion is of great assistance in arriving at a diagnosis; but a primary tubercular affection of the peritoneum has not attracted so much attention. I have recently had two such cases under observation. They both ran a very obscure course, and, when apparently slowly advancing towards recovery, rapidly proved fatal from tubercular meningitis.

As regards the difficulty of diagnosis the author calls attention to several points: the low temperature and the comparative absence of pain and tenderness in some cases; and the copious ascites with distension of the superficial abdominal veins simulating ascites from cirrhosis of the liver, in others. As regards the morbid anatomy, tubercle in the peritoneum appears to present two very different aspects. In one, seen chiefly during life in cases of abdominal section, the peritoneum presents a roughened papillary appearance. There are few or no adhesions and no naked-eye appearance of tubercles, but on microscopic examination each papule or nodule is found to be of tubercular origin. This condition of the peritoneum leads to copious ascites, and is cured by abdominal section. It probably occurs in those subjects in whom tubercle in the lung would take the form of 'fibroid phthisis.' The other is the form met with in fatal cases of not too chronic course. The whole peritoneum is studded with visible miliary tubercles, the great omentum is shrunken into a thickened band, and the intestines are glued together with scanty lymph.

As regards treatment, the author states that when once tubercular affection of the peritoneum has taken place the tendency is inevitably towards death; and that the only successful treatment is abdominal section, which he, therefore, strongly recommends as the treatment *par excellence* of tubercular peritonitis. My own view is that many of the cases of peritonitis that recover under purely medical treatment are tubercular in their origin. Also that abdominal section is specially suited to the first of the two forms of tubercular affection of the peritoneum described, namely where there are papules or granulations. Where the presence of tubercles has given rise to a diffuse fibrinous exudation gluing the intestines together, the prospect of recovery even after abdominal section is much less.

H. Handford, M.D.

* *Lo Sperimentale*, June 1888.

Article 818.

MORE MADDEN ON SOME OF THE RECENT DEVELOPMENTS OF OBSTETRIC AND GYNÆCOLOGICAL SCIENCE.*

The progressive improvement of midwifery practice has been strikingly evinced during the past few years. Thus the pathology and preventive treatment of intra-uterine death and abortion have been freed from much of their former obscurity and difficulty by the recent writings of Dr. Priestly. The prevalence of puerperal septicæmia, by epidemic outbursts of which, in my early days, I have repeatedly seen the crowded wards of a great maternity hospital decimated, has been largely diminished by the hygienic and antiseptic measures now adopted for its prevention. Whilst if septicæmia should still occur, we are now armed with more scientific means for the curative treatment of this disease, which some years ago was generally

* Abstract of an Address delivered at the opening of the Section of Obstetric Medicine, Meeting of British Medical Association, Glasgow, Aug. 7, 1888. By Thomas More Madden, M.D., F.R.C.S.Ed., President of the Section, Obstetric Physician Mater Misericordia Hospital, Dublin.

classed amongst the incurable *opprobria* of our art. In like manner by the adoption of improved methods for the prevention and treatment of *post-partum* hæmorrhage, that once frequent source of obstetric mortality has been almost completely removed. At the same time the throes and pains of labour have been rendered more endurable by the employment of comparatively safe anæsthetics, such as the mixture of two parts of ether and eau de Cologne with one of chloroform, which, for nearly twenty years, I have found a generally efficient and agreeable anæsthetic in such cases. Moreover, by judicious instrumental assistance, we may now, in many instances, safely abridge the duration of that formerly often long-protracted period of parturient suffering, which, when a student, I have too often seen allowed to continue unrelieved for forty and fifty, and even for eighty, hours and upwards. Lastly, the former appalling frequency of child-destroying operations has been reduced in an exact proportion to the increasing employment of the forceps. Nor have the limits of the utility of this instrument, as a substitute for the cephalotribe, craniotomy forceps, cranioclast, *et hoc genus omne*, been even yet fully reached.

The Use of the Forceps, and its Improvement.—The main reason why any embrotomic instruments are still included in the ordinary obstetric outfit appears to me the fact that most midwifery practitioners do not recognise sufficiently the compressive power of the long forceps, and, moreover, rely exclusively on some one form of forceps, whether the head be above or within the pelvic cavity, and without reference to the kind of mechanical power—tractile, lever, or compressive—that may be specially required in each case. Desirable as it may be to carry as few implements as possible in the obstetric bag, it is, nevertheless, impossible to combine in any one instrument properties so distinct as those referred to. In operative midwifery there should surely be some definite proportion between the power employed and the resistance to be overcome. Hence it seems about as needless to resort to an instrument of such compressive and lever power as the double-curved long forceps, to assist delivery in an ordinary case of delay in the second stage, as it would be to employ a steam-hammer to crack a walnut.

I have endeavoured to carry out these views in the two instruments now exhibited, which have been considerably modified and, as I think, improved in the course of experience since I first demonstrated the use of their original models. The first is a short straight traction forceps, the blades of which are only six inches in length, and are so curved as to fit the fœtal head very exactly, and so widely fenestrated as to allow the scalp to protrude when applied, and thus protect the maternal passage during extraction. This instrument, as may be seen, is very portable, and, locking loosely, is easily applied; and being a really efficient tractor, as I have proved by experience of its use in upwards of three hundred cases, may, therefore, be employed in nine-tenths of the cases in which any instrumental assistance is required—namely, those in which delay arises from inertia in the second stage of labour.

The second instrument shown is intended only for cases of difficulty from disproportion or pelvic flattening. The blades are, therefore, of considerable length and strength, and are approximated by a powerful screw, by which the amount of compressive force exercised may be exactly regulated. The affixable traction rods are easily closed or separated by a simple and novel mechanical arrangement. My tractors differ in several respects from any others, and are so made as to be applicable to any forceps,

Fig. 1.—DR. MORE MADDEN'S SHORT MIDWIFERY TRACTOR.

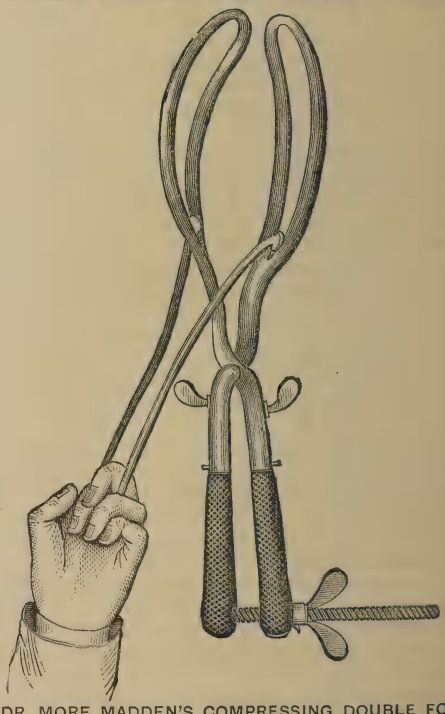


Fig. 2.—DR. MORE MADDEN'S COMPRESSING DOUBLE FORCEPS

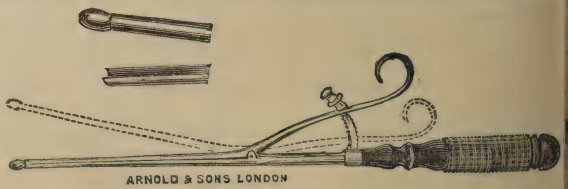


Fig. 3.—DR. MORE MADDEN'S RAPID CERVICAL DILATOR.

including in their handle a case for hypodermic syringe and discs. This forceps, as will be seen, is not only a tractor and lever, being convertible at will into a short traction forceps, by the removal of the compressing handles, but, in its entirety, when these are affixed, is moreover a compressor of great power, with which the fœtal head may be gradually moulded out and compressed within the limits of viability, so as to admit of delivery through pelves, from which a living child could hardly be otherwise extracted. I need hardly add that such an instrument as this latter requires great caution in its use, and should be employed only in the exceptional cases for which it is designed, and as a substitute for embryotomic implements. These instruments are made by Messrs. Corcoran, Stephen's Green, Dublin, who have very successfully carried out my views in their construction.

Recent Progress of Gynæcology.—The development of this branch of medicine since our Association last met in Scotland has been still more remarkable than that effected in the practice of midwifery during this period. Thus, for example, only a few years ago many of the most frequent forms of endo-uterine and peri-uterine disease were beyond the diagnostic and remedial reach of gynæcologists, then unprovided with those means of rapidly and thoroughly dilating the cervical canal, or with the many other methods of direct investigation by the aid of which any well-educated practitioner may now recognise and treat endo-uterine, ovarian, tubal, and other intra-peritoneal and pelvic complaints that baffled detection or treatment. Nor in those pre-antiseptic days could have been anticipated the wonderfully successful results since realised from laparotomy operations, and more especially ovariotomy, as well from some still more recent developments of intra-peritoneal surgery in tubal and other diseases, including even peritonitis and cancer of the uterus, the latter a subject which has been recently elucidated in Dr. J. Williams' Harveian Lectures. In the last-named cases, however, it is a debatable question whether we should persevere further with the intra-peritoneal procedure for the removal of the uterus introduced by Freund, in view of the better results obtained from the vaginal method advocated by Dr. Martin, of Berlin ; and also whether in the latter case the operation should be limited, as recommended by Dr. Williams and Dr. Braithwaite, to the removal of the cancerous portion, and not be extended to the extirpation of the entire uterus.

Only within the time referred to has the general correctness of Dr. Graily-Hewitt's views with regard to the importance and treatment of uterine displacements and flexions become commonly accepted. Neither were the symptoms and appropriate treatment of ovarian displacements understood until a more recent period, when attention was directed to them by Dr. Barnes' able paper on this subject in the *American Journal of Obstetrics*, and, in a minor degree, perhaps, also by a memoir of mine on the same topic in the *Transactions of the Irish Academy of Medicine.* Nor is it so long since the bearing of cervical lacerations on pelvic pathology, as first demonstrated by Dr. Emmet, of New York, first became recognised in this country. Finally, the diagnosis, importance, and curability of diseases of the uterine appendages, such as hydro- and pyo-salpinx, together with several other of the causes of female suffering and death, were, in like manner, practically ignored by gynæcologists until within a very recent period.

Laparotomy in Relation to Gynæcology.—Foremost amongst the proofs of modern gynæcological progress, the most signal is that afforded by the results of abdominal surgery in the treatment of ovarian tumours, as demonstrated in countless cases at home and abroad and in this country, more especially in the practice of Sir Spencer Wells, Dr. Keith, Mr. Lawson Tait, Dr. Bantock, Dr. Savage, Mr. Thornton, and other specialists in this department of operative surgery, which not very many years since, was so loudly and unfairly decried. Whether this should encourage the present frequency of resort to laparotomy in the various other intra-peritoneal morbid conditions in which it is now advocated, or not, is, however, another question, and one which, I think, may be still advantageously reconsidered.

Treatment of Fallopian Tube Diseases.—With respect to the tubal diseases, to the operative treatment of which so much attention is now devoted, and which I have elsewhere fully discussed, I shall only here again observe that, whilst recognising the fact that in some instances of pyo-salpinx and hydro-salpinx the removal of the diseased uterine appendages affords the only available means of treatment, and fully appreciating the surgical skill by which operations for this purpose have been brought to their present perfection, I have not, in my own experience, found laparotomy operations as generally necessary in such cases as they are apparently now deemed by others. On the contrary, I am confirmed, by increasing observation, in the belief that in some instances these tubal diseases, more especially in cases of hydro-salpinx, may terminate favourably without any surgical treatment, and, moreover, that in other cases such collections, whether purulent or serous, may be evacuated by cautious aspiration through the vaginal roof. Very recently I had an opportunity of again proving the advantages of this method of treatment in the case of a lady, who, after many months of suffering, was sent to me from a distant country to have the affected uterine appendages removed, but whom I succeeded in relieving of her trouble, with the assistance of Dr. Duke, by aspirating the Fallopian tube, and thus removing about 10 drachms of fluid from the distended duct. I would, therefore, still urge the expediency of a fair trial of other less serious methods of treatment before resorting to the extirpation of the uterine appendages in these cases generally.

Operative Treatment of Uterine Tumours.—It would be impossible within the limits of this Address to enter at length into the consideration of a question so large and so controversial as the general necessity for surgical interposition in the treatment of uterine fibromata. This topic, I am glad to see, will be brought before you during this meeting by those eminently qualified to speak on the subject ; and I trust that in the ensuing discussion some new light may be thrown on the comparative merits of the various intra-peritoneal and vaginal surgical procedures advocated in such cases, as well as on the value of electrolitical treatment. Nor, in this connection, should the possibility of arresting the growth of these tumours in some instances by appropriate medical treatment, as well as the greater probability of thus effectively checking hæmorrhage so occasioned, and more especially by the free administration of ergot and iodide of potassium (to

which I have elsewhere called attention), be entirely lost sight of.

As to the former, or surgical method, I may, however, venture to repeat that in the majority of cases of interstitial and sub-peritoneal uterine tumours no active treatment whatever appears to me essential, inasmuch as such growths seldom, if ever, destroy life; and in many cases become arrested in their development and quiescent in their symptoms at the menopause, or may even possibly disappear altogether in the course of time. The latter event is, however, too exceptional to have much influence in determining the expediency of surgical treatment, and more especially that by oöphorectomy, which is unquestionably called for in the case of fast-grown fibroids. Thomas More Madden, M.D.

Article 819.

THE ELECTRICAL TREATMENT OF UTERINE FIBROIDS.

During the last few months the method of treatment of uterine fibroids suggested by Dr. Apostoli has excited a great deal of attention, and has come very largely into use. In the Societies several very animated, not to say acrimonious, debates have taken place, and the advocates of this particular procedure have had to withstand attacks of the most violent description at the hands of those who disbelieve in it. Virtually two camps have been formed, and the struggle has been constant and severe.

One reason why Apostoli's plan has met with such stout opposition is probably that its advocates have, in many instances, allowed their zeal to outrun their discretion in advancing its claims. Long before many of them had thoroughly mastered the technics of the force which they employed, the most extravagant forecasts were made as to the benefits to be anticipated from its employment. With a remarkably scanty array of facts in support of their pretensions, they boldly ventured to beard the lion in his den, and brought before their compeers a number of cases which were necessarily inconclusive, and often positively unsatisfactory.

Let us now examine for ourselves the nature of this treatment, which has set gynæcologists by the ears and given rise to heated arguments and bitter repartee. The idea of utilising the effect of electricity in stimulating muscular fibre to contraction, for the purpose of checking uterine hæmorrhage, and incidentally for aiding the spontaneous enucleation of interstitial fibroids, is by no means new. In one form or another, and for this or that purpose, it has been extensively resorted to, as any authority will tell us. In suitable cases this treatment was often productive of good, and, in any event, did not expose the patient to any great risks. Not very long after M. Apostoli had revealed his method to an astonished and admiring world, the *modus operandi* was suddenly *soi-disant* improved upon, and instead of merely passing the current through the uterus and its tumours by means of one electrode in the vagina or uterus, and the other applied to the abdominal walls, arrangements were made for plunging insulated needles into the substance of the tumours. This departure evidently exposes patients to risks from which the other was free; though, on the other hand, it caused a lessening of the bulk, and even the complete disappearance, of tumours which had resisted the mere anodyne treatment. The action set up in this way was ascribed—erroneously enough, in all probability—to electrolysis—that is, electrical decomposition of the tissues into their component parts. So far no trustworthy evidence has been adduced of the existence of any such action, and it is more than probable that the success of the treatment is due to the purely caustic action of the current. It is a well-recognised fact in connection with these fibroid tumours that if the degenerative process be once started it is very apt to go on until the tumour is destroyed. In other words, there is every chance of the fibroid being made to slough. Now, every student of gynæcology must be cognisant of the grave danger to the patient of such a process, and the records of Apostoli's disciples afford ample proof thereof, were any such needed.

The arguments against this method of treatment may be summarised as follows:—That, except under very favourable circumstances, no effect of a permanent nature is produced, and that in those cases in which a good result has followed, the same might have been attained by simpler, less expensive, and less hazardous means. Secondly, that, in graver cases, the risk of inducing sloughing of the fibroid more than compensates for any advantages which the method may be claimed to possess over removal of the tumour through an abdominal incision or *per vaginam*. These arguments the electro-gynæcologists will find it difficult to refute, for there is no lack of cases bearing them out. Mere mortality returns, of course, prove nothing, because no similarity between the units of comparison can be guaranteed. The recorded successes are by no means striking, either in kind or number, while the risks of the treatment are obvious. Even in the most satisfactory cases time alone will show to what extent the relief obtained is of a permanent character.

The discussion at the Glasgow meeting of the British Medical Association did not throw much additional light upon the subject, while Sir Spencer Wells, Drs. Aveling, Thompson, and others testified to sundry good results. Mrs. Garrett Anderson, Dr. Edis, and others, gave evidence to the contrary. The only salient feature of the discussion was the emphatic declaration of Dr. Apostoli that his method 'was in no sense a radical cure for uterine fibromata, but that it would, under favourable circumstances, lead to an amelioration of the most distressing symptoms.' This remarkable assertion is somewhat in contradiction with the classical maxim *sublatâ causâ tollitur effectus*. If his treatment avowedly leaves the cause untouched, it is evident that no permanent improvement can be hoped for. As it is, the treatment is extremely tedious, protracted, and therefore costly, uncertain and therefore discouraging. If the amelioration so dearly purchased be only a temporary respite, neither doctor nor patient will be willing to incur the sacrifice of time, money, and patience which it occasions.

Alfred S. Gubb.

International Congress of Dermatology.—Amongst those who have already accepted office in connection with the International Congress of Dermatology to be held in Paris in August 1889, are:—Dr. Ricord, honorary president; Professor Hardy, president; MM. Emile Vidal, Ernest Besnier, Alfred Fournier, Hallopeau, Quinquaud, Tenneson, Henri Feulard, members of the initiative committee. Mr. Malcolm Morris, 8 Harley Street, and Dr. T. Colcott Fox, 14 Harley Street, have been appointed secretaries for this country, to whom all communications should be sent.

Article 820.

BESSER ON THE MICROBES OF PYÆMIA AND SEPTICÆMIA.

In the *Vratch*, Nos. 19 and 20, 1888, Dr. L. V. Besser, of St. Petersburg, publishes two very interesting contributions to the bacteriology of pyæmia and septicæmia.

I. *Microbes of Pyæmia.*—Professor Ogston was the first observer who (1881), having applied Koch's bacterioscopic methods to the experimental inquiry into purulent and septic affections in man, proved by his beautiful researches that pyæmia and septicæmia resulted from infection of the organism by pathogenic microbes penetrating from a purulent or septic local focus of the two species of the microbes (*staphylococcus* and *streptococcus*) found by him in the diseases under consideration. He pointed to the *streptococcus* as the microbe of pyæmia. Since his epoch-making researches up to date there were published successively, by various observers, 23 cases of pyæmia where a bacterioscopic examination had been carried out, showing in 14 cases *staphylococci*, in 7 *streptococci*, and in 2 both of the microbes simultaneously. [The said cases were communicated by Rosenbach, Eiselsberg, Kranzfeld, Passet, Mëërovitch, Bonome, Guttmann, Brieger, Tilanus, Pavlovsky.] Like Ogston, Rosenbach comes to the conclusion that pyæmia is caused solely by the *streptococcus*, while Pavlovsky asserts that it can be produced by the *staphylococcus* alone. With the exception of Mëërovitch and Brieger, the observers limited their bacterioscopic examination to one or more metastatic abscesses, omitting to establish the identity of the microbes found in the latter with those as might be present in a primary focus. Moreover, they usually left out of consideration the question whether in pyæmia microbes in internal organs were present or not. To elucidate those important points, Dr. Besser undertook bacterioscopical examination in 23 cases of pyæmia which came under his observation in the Alexandrovskaia Town Infirmary during 1886-87, and which may be divided into the following four etiological groups :—

I. Pyæmia developing in the course of, and after, typhoid and recurrent fevers; II. Traumatic pyæmia; III. Pyæmia following local diseases (carbuncle, erysipelas, phagedænic soft chancre); IV. Pyæmia of uncertain origin, developing in connection with gluteal abscesses, sloughing crural ulcer, gonitis, suppurative parotitis, &c. The material (for cultivation, &c.) consisted of blood, parenchymatous fluid from organs, and pus from metastatic abscesses. There were seen three species of microbes; *a*, the staphylococcus albus; *b*, the staphylococcus aureus; and *c*, the streptococcus. The microbes were found *a*, during the patient's life, in pus in every one of the 20 cases examined; in blood in 11 of 12 cases examined; in local serous fluid in 1 case (twice) examined; *b*, after the patient's death, in pus in 17 cases of 17 examined; in blood in 9 of 14; in organs in 9 of 14. As to the species of the bacteria, in 8 cases staphylococci were present; in 14, streptococci; and in 1, both of them simultaneously. The general deductions from Dr. Besser's researches may be condensed as follows :—

1. In view of the fact that the cultures obtained from an *ante mortem* material are quite identical in all (morphological and biological) regards with those obtained from a *post mortem* one, there cannot possibly exist any doubt whatever that the bacteria in question are present in the pyæmic patient's organism during life (and do not represent a *post mortem* occurrence as is alleged by some sceptical minds). 2. The pathogenic microbes of pyæmia are absolutely identical with those of suppuration, as has been proved already by researches of Ogston and, later on, by those of Passet, Rosenbach, Kranzfeld, &c. 3. The opinion that a streptococcus pyæmia is characterised by the predominance of purulent gatherings in serous cavities, while a staphylococcus pyæmia is marked by metastatic abscesses in parenchymatous organs, does not find any support in clinical facts, since Dr. Besser happened to meet such streptococcus cases where a typical fulminant pyæmia was present, which in no way differed from that met with in the staphylococcus ones. Similarly, Guttmann and Mëërovitch observed metastatic abscesses in parenchymatous organs, caused undoubtedly by the streptococcus, and purulent accumulations in serous cavities, produced by the staphylococcus alone. 4. Rosenbach's assertion that pyæmia is caused mainly, if not solely, by the streptococcus, is also untenable, since in some of Dr. Besser's cases the staphylococcus alone was present. 5. In a certain proportion of cases, the penetration of the pyæmic microbes into the patient's system is favoured by such predisposing causes as acute febrile diseases (in 9 cases of Besser), or chronic alcoholism (2), which conditions decrease the patient's power of resistance. In other cases where any apparent predisposing (weakening) conditions are absent, pyæmia may develop, probably, solely in virtue of a great virulence or concentration of the infective or pathogenic principle. 6. Ogston's postulate that pyæmia results invariably from penetration of the pathogenic microbes into the organism, does not admit any doubt whatever. 7. A typical pyæmia can be caused, in presence of certain favourable conditions, both by the streptococcus and staphylococcus. Any discrepancies between the various observers in regard to this point may be easily explained by a yet scanty number of the cases examined, as well as by an accidental selection of their materials. Of 46 cases examined bacterioscopically up to the date, in 22 pyæmia was caused by the staphylococcus, in 21 by the streptococcus, and in 3 by both of them simultaneously.

II. *Microbes of Septicæmia.*—Dr. Besser was able to find in international literature only 15 cases of septicæmia in man examined bacterioscopically (Pasteur, Doleris, Ogston, Rosenbach, Eiselsberg, Kranzfeld). In a majority of the cases, he says, the question concerning a simultaneous presence of microbes in the patient's pus, blood, and internal organs was investigated only more or less superficially. Dr. Besser's researches embrace 22 cases of traumatic septicæmia which were under his observation in the said hospital during 1885–87. The cases are divided by him into three groups, one of which includes puerperal septicæmia, another that supervening after severe traumatic injuries, and the third one that developing after relatively slight injuries. In every one of the cases the streptococcus was found. During the patient's life the microbes could be discovered in blood only in 4 of 16 cases examined; in local pus or turbid serous fluid in every one of 17 cases examined; in urine in 3 of 4; and in sputum in 3 of 3. After the patient's death they were seen in blood in 7 of 15 cases examined; in organs in 16 of 18; and in pus or uterine discharge in 12 of 12. In those cases in

which the tissues were in a state of extreme decomposition, or where there were present open cavities, there could be detected locally sometimes (in 6 cases of 22) staphylococci (in relatively scanty numbers) and many other species of bacteria (especially some rod-shaped ones), side by side with the streptococcus. But in three cases of typical fulminant septic phlegmon the streptococcus alone (in a pure culture) could be found. Dr. Besser's conclusions from this series of researches may be given briefly thus. 1. The essential pathogenic agent of septicæmia is the streptococcus alone. The staphylococcus might be regarded only as an occasional second-place accomplice in doing mischief. 2. Since the streptococcus can very rarely be discovered in the patient's blood (and that apparently only just before death), its virulent products which hopelessly poison the organism, seem to be formed by the microbe at the site of the primary lesion. 3. Of 18 cases reported by Dr. Besser's predecessors, 17 seem to similarly point out that septicæmia cannot arise without the agency of the streptococcus. At all events, Dr. Eiselsberg's case, where septicæmia was thought to be caused by the staphylococcus albus, as yet stands quite alone in international literature. V. IDELSON, M.D.

ARTICLE 821.

UNJENIN AND PETROFF ON LAPAROTOMY FOR CHYLOUS CYST OF THE MESENTERY.

IN the *Dnevnik Kazanskaho Obshtchestva Vratchei*, Nos. 7 and 8, 1888, p. 72, Drs. I. V. Unjenin and N. V. Petroff give a detailed account of the following remarkable and rare case which recently came under their observation at Professor N. N. Fenomenoff's gynæcological clinic, in Kazan. A merchant's wife, aged 26—a well-made and fairly nourished, generally healthy, but sterile woman, menstruating since 18, married at 20—was admitted on account of a gradually increasing and very movable abdominal tumour, with occasional constipation, fever, and headache, all of about six months' standing. Her menstruation had been regular till 22, when it began to appear every two, and then every three or six weeks, but always in an excessive amount and in association with pain; several months before her admission there was amenorrhœa for two or three months, but later on the flow became regular, though scanty, and accompanied with inguinal and sacral pain. At the examination the circumference of the abdomen was found to be 82 centimètres. About two finger-breadths below and slightly to the right from the navel there was felt a painless, smooth, elastic, globular tumour, of the size of two male fists, which could be easily moved from side to side and examined through the right, left, and anterior vaginal fornices. It was unconnected with the womb, which, as well as the vagina, did not present anything abnormal. A non-adherent ovarian cyst with a long pedicle was diagnosed, and a median laparotomy was performed by Professor Fenomenoff, under antiseptic precautions as used in his clinic (*vide* the LONDON MEDICAL RECORDER, March 20, 1888, ART. 190). The peritoneum having been opened, the cyst at once bulged out from the wound. The puncture was followed by a powerful ('fountain-like') jet of a milky fluid (to the amount of two teacupfuls, or even more). The sac proved to be situated between the layers of the mesentery of the small bowel. It was extirpated mainly with the fingers, the mesenterial folds being stitched together and partially removed. The right ovary was found somewhat enlarged, the left one quite normal. Having thoroughly washed out the abdominal cavity with a 2-per-cent. solution of borax, Dr. Fenomenoff closed the abdominal incision with three deep wire, and seven superficial silk sutures, and dressed it with iodoform. The aftercourse was uneventful, the temperature rising only once up to 38° C. (in the evening after the operation). The last sutures were removed on the thirteenth day; on the twenty-second the patient left quite well, with a firm scar. The cyst was as large as a big apple, its walls measuring in thickness from ½ to 2 millimètres at various spots. Its inner surface was smooth, greyish-white, here and there brownish, the outer aspect being rough, covered with fibrous and fatty tissues. Microscopically, at the thickest spots the wall consisted of three layers, of which the inner one was lined with flat endothelial cells; abounded in connective tissue-cells and dilated blood-vessels; and contained recent extravasations, as well as heaps of a yellow granular pigment. The middle layer consisted of fibrous tissue with scanty cells and vessels, but traversed with numberless islets of lymphoid tissue and typical lymphoid follicles (with reticle and lymphoid cells). At such spots where lymphoid tissue was but scanty there could be seen small patches undergoing mucoid degeneration. The outer layer contained only pure fibroid tissue, resembling that of capsules of lymphatic glands. At the thinner spots of the sac only the inner and middle layers were present. The writers think that the chylous cyst resulted from a lymphatic gland, by way of its gradual distension by the fluid stagnated, with a consecutive mucoid degeneration of lymphoid tissue under the pressure of the fluid. It is the first case of a mesenterial chylous cyst in the Russian literature. The authors were not able to find more than nine similar cases in international literature, in five of which laparotomy was performed, with four recoveries and one death. Since none of the cases have been reported on in the LONDON MEDICAL RECORDER, or referred to in Dr. R. Neale's excellent *Medical Digest*, it might be useful to adduce the cases in briefest outlines. They are these.

1. Bramann's (*Langenbeck's Archiv*, vol. xxxv.) case, referring to a nervous but generally healthy man of 63 who was admitted to Professor Bergmann's clinic with a tumour as large as a child's head, first noticed about 1½ year before. Either hydatid or dermoid of the mesentery having been diagnosed, median laparotomy was performed, about 700 or 800 cubic centimètres of a milky fluid (containing fatty globules and cholesterine crystals, but no cells) removed, and the cyst incised, stitched to the abdominal wound, and drained. The man left well by the end of the fifth week. The cyst was supposed to have developed from the cysterna chyli, through its distension and subsequent destruction of the septa, from pressure of its contents. 2. Kilian's (*Berlin. klin. Wochensch.*, 1886, No. 25). In a woman of 61, suffering from abdominal and lumbar pain, with vomiting and diarrhœa, there was found an abdominal tumour measuring 22 centimètres in diameter. It was punctured and gave 2,500 cubic centimètres of a greyish-white alkaline fluid, containing fatty globules and colostrum-like corpuscles. A month later other 2,200 cubic centi-

mètres of the same fluid were withdrawn. The cyst again refilled in four weeks, and was this time incised and drained, the woman rapidly and permanently recovering. The cyst was thought to be a distended thoracic duct. 3. Enzmann's (*Basle Inaugural Dissertation*). In a woman, aged 77, who had died from chronic endocarditis of the mitral valve, at the necropsy there was found a spindle-shaped cyst connected with the thoracic duct, which was closed lower down by an organised thrombus. The cyst, measuring 9 × 5 × 7·5 centimètres, was situated close to the vertebral column and aorta, between the middle peduncles of the diaphragm, partly protruding into the right pleural sac, and reaching down within 1 centimètre from the right renal artery. It was smooth, rather flabby, thick-walled, and contained inspissated chylus of a cinnamon-brown colour. 3. Kuester's (*Ein chirurgisches Erkenntniss*, Berlin, 1882). A girl of 21 was admitted with a painful and tender, vertically movable abdominal tumour, of the size of a child's head. A puncture withdrew a milky fluid, containing (according to Professor Salkowski's analysis) 7·24 per cent. grammes of proteids and 5·94 of fats and cholesterine, and, microscopically, fatty globules, scanty fatty degenerated epithelial cells, and leucocytes. A re-accumulation having taken place in eight days, laparotomy was performed to extirpate the cyst, which proved thick-walled, and lined internally with many layers of epithelial cells. Eighteen hours later the girl died from septic peritonitis, caused by accidentally wounding her bowels during the operation. 4. Millard and Tillaux's (adduced in Hahn's paper in the *Berlin. klin. Wochenschrift*, 1887, No. 23). A man, aged 31, was admitted to the Lariboisière Hospital with excruciating abdominal pain in connection with a very movable tumour, which at first was diagnosed as a wandering kidney, and then as intestinal invagination. Laparotomy showed that it was a mesenterial cyst. It was extirpated, the patient making excellent recovery. The cyst was filled with a milky fluid, containing only fat and margarine crystals, but no cells. The wall consisted of three layers, the middle of which was vascular, and traversed with lymphoid tissue, and dilated lymphoid spaces. The writers think that the cyst had developed from a lymphatic gland. 6. Werth's (*Archiv für Gynecologie*, 1882, vol. 19) case is that of a woman who first noticed a very movable supra-pelvic tumour (as large as an infant's head) three months before the operation, her attention having been drawn to it by frequent attacks of colics. Laparotomy with extirpation was performed. The tumour proved to lay between the laminæ of the mesentery of the jejunum and to contain a fluid resembling an inspissated milk. Its walls contained lymphoid tissue; in other words, the cyst was a degenerated lymphatic gland. 7-8. Rokitansky (*Lehrbuch der Pathol. Anatomie*, 3rd Edit.) describes two cases where at the necropsy there were found cysts resulting from degeneration of mesenteric lymphatic glands. In one, in that of a man, aged fifty-three, there were present several small-sized cysts with thick walls and yellowish-white or whitish contents; while in another, in a man-servant of thirty-six, there was found a lobulated sac of the size of a child's head, with a milky, slightly rosy fluid mixed with gelatinous red and black clumps. 9. Virchow (*Berlin. klin. Wochensch.*, 1887, No. 14) also described a case of multilocular cyst originating from degeneration of a mesenterial gland. In common with Dr. Hahn (*loc. cit.*), Drs. Unjenin and Petroff believe that the most rational method of treatment in such cases is laparotomy with extirpation (or, if the latter be impracticable, with incision into the cyst, stitching to the abdominal wound, and drainage). A single puncture is thought to be insufficient to effect a complete cure. The diagnosis is said to be very difficult, since there does not exist any reliable differential sign of the cyst in question. In none of the six cases operated upon could a correct diagnosis be arrived at before opening the abdomen. V. Idelson, M.D.

Article 822.

WEINBAUM ON PHYSIOLOGICAL ALBUMINURIA.

In a preliminary note in the *Vratch*, No. 11, 1888, p. 204, Dr. N. Weinbaum, of Kovel, says that he has examined the urine in 98 healthy (apparently) pupils of a local town school, and in 159 healthy (apparently) soldiers of the local garrison. With the school children the examination was made twice in the course of a day—in the morning just after their rising, and after the class-work; while in the soldiers three specimens were examined daily—one from the first-morning urine, another taken two hours after the dinner (consumed about the noon), and a third collected at 8 P.M. Each specimen was invariably subjected to the following four tests:—(*a*) a portion was boiled with a drop of acetic or nitric acid; (*b*) another was cautiously mixed with cold nitric acid; (*c*) to a third one there were added first about half of its volume of acetic acid, and then, drop by drop, a solution of ferrocyanide of potassium; and (*d*) a fourth one, strongly acidulated with some acid, was shaken and heated with an equal volume of a saturated solution of sulphate of soda. Only such specimens were regarded as containing albumen which gave positive results on at least three of four tests, opacity or a precipitate with the *a*, *c*, and *d* tests, or a whitish ring with the *b*. The main results of Dr. Weinbaum's extensive researches may be summarised as follows:—

A. *School Children.*—Boys, aged from 8 to 15, belonging mostly to tradespeople. The morning urine was examined in 98 boys 119 times, albumen being detected once in 27 and twice in one. The urine collected after class-work was tested 115 times in 95 boys, albumen being found once in 52, twice in 7, and thrice in one. 1. No albumen was found in the urine at any time in 32 of 95 children (33·6 per cent.). 2. Albumen was present both before and after class-work in 23 of 95 (24·2); only before it in 5 of 98 (5·1); only after it in 37 of 95 (38·9). In the morning urine generally, in 28 of 98 (28·6); in the urine after class-work generally, in 60 of 95 (63·2). 3. As to the age, albumen was most frequently found in children of 10 and 11, 86·9 per cent.; most rarely in those of 12 and 13, 54·7 per cent.

B. *Soldiers.*—I. *Regimental School.*—Sixty-three men, all Russian. 1. Albumen was found in the morning urine in 31·7 per cent.; in the after-dinner one, in 53·9; in the evening, in 39·7; only in the morning, in 4·8; only in the after-dinner, in 14·3; only in the evening, in 4·8. In the morning and after-dinner urine, in 7·9; in the morning and evening one, in 3·2; and in the after-dinner and evening, in 14·3. II. *Regimental Brass Band.*—

Fifty-one men, 27 of them being players of several years' standing and 24 pupils; 14 Jews and 37 Russians. The results may be conveniently represented in the shape of the following interesting table, showing the influence of profession and race :—

Albumen was found (in per cent.) in the urine collected in the—	Old brass-players.			Pupils, brass players.		
	Russian.	Jews.	Both.	Russian.	Jews.	Both.
Morning	47·3	50·0	48·1	41·2	16·6	34·8
After dinner	42·1	37·5	40·7	56·3	25·0	50·0
Evening	26·3	50·0	32·0	53·3	40·0	50·0
All the three times	15·8	33·3	20·0	20·0	25·0	21·1

III. *Sappers* (45 men, working not less than 10 hours daily, their scanty dietary and other conditions being identical with those of the former two groups). 1. Albumen was found in the morning urine in 17·8 per cent.; in the after-dinner one, in 22·7; in the evening, in 31·1; only in the morning, in 11·1; only in the after-dinner, in 9·1; and only in the evening, in 20 per cent. [Dr. Weinbaum's paper may be read usefully in connection with a series of valuable contributions on the same interesting subject, which have lately appeared in British medical literature, such as Drs. A. Stirling's (*Lancet*, Dec. 10, 1887), Ralfe's (*ib.*, Dec. 17), Pavy's (*ib.*, April 14, 1888), Robert Barnes (*ib.*, May 12), G. Johnson's (*ib.*, Jan. 7), Grainger Stewart's *Brit. Med. Jour.*, June 11, 1887), Havilland Hall's (*ib.*, Feb. 18, 1888), &c. Dr. Weinbaum continues his instructive researches and, as the reporter happens to know, is about to publish, at an early date, an elaborated monograph on the subject. It would be well if he could find it feasible (1) to introduce into his further investigations picric acid as an additional test for albumen in the urine; and, what is by far more important (2) to change the term of the phenomenon he studies. One decidedly cannot help thinking, in common with Professor George Johnson, that such an epithet as a 'physiological' albuminuria is altogether unscientific, since it obviously manifests the presence of a certain preconceived idea in the scientist's mind; and it is illogical, too, since, after all, the intrinsical sense and the ultimate aim of the whole scientific inquiry into the matter is clearly nothing else than to make out whether the occurrence of albumen in the urine of *apparently* healthy persons represents a physiological phenomenon or, on the contrary, a pathological one. If so, then those inquirers who use the adjective 'physiological' are obviously bent on settling the question whether the self-same albuminuria is a normal thing, or, after all, a 'physiological disease.'—*Rep.*] V. Idelson, M.D.

Article 823.

TWO CLIMATIC HEALTH-RESORTS.

Herrenalb (Lords' Alp), called 'the Paradise of the Würtembergian Black Forest,' is situated half way between Baden-Baden and Wildbad. Its climate, owing to its sheltered position, is very mild and free from rapid changes of temperature. The average temperature at an elevation of about 1,400 feet above the sea, during the summer months, is 16°·8 C. (64°·4 F.). The village is surrounded by splendid pine forests, which towards the south open into the valley of Gaisbach (Goats' brook), and northwards into the Albthal (Alp Valley), with its rich pastures, through which the river Alb takes its course into the not far distant plain of the Rhine. Pure air and pure spring water, rising from granite rocks, well-kept walks, intersecting the forest in every direction, splendid views, as from the Falkenstein (Falcon's rock), the Schweizerkopf (Swiss peak), &c.—render Herrenalb one of the most pleasant climatic health resorts. There is a large, well-appointed, hydropathic establishment, in which, as well as in the Villa Falkenstein, there are numerous baths, electrotherapeutics, and massage. The medical staff consists of Hofrath (Court councillor) Dr. Suchier, Dr. Mermagen, and Dr. Denk, the latter two superintending the hydropathic institution.

Herrenalb is resorted to by patients suffering from nervous complaints, diseases of the lungs, functional disturbances of the circulation, and impaired general nutrition—viz., chlorosis, scrofula, &c.

The Baths of Montbarry are situated between the townships of Gruyères and Bulle, forty-five minutes' walk distant from the latter, on a hill 2,196 feet above the sea, in the most picturesque portion of the Canton Fribourg, in the Oberland of the French division of Switzerland. The village is surrounded by hills covered with forests, which alternate with extensive rich pasturage, dotted with dairy-farms, in which the celebrated Gruyère cheese is made. Behind these fore-hills rises the high range of the Fribourg Alps. The sulpho-carbonic springs were discovered about a century ago by Dr. Thorin. They are of low temperature, 10° C. (50° F.), and resemble in composition and character those of Gurnigel-Bad, near Bern, especially to the Stockquelle. The water is used for baths and internally. The former prove very efficacious in skin diseases and rheumatic affections, and the waters are prescribed internally in cases of chronic gastric catarrhs and atony of the stomach, and in habitual constipation. The establishment is under the care of Dr. Pégaitaz of Bulle. There is capital trout fishing in the numerous brooks of the surrounding pastures.

Ferd. Adalb. Junker, M.D.

Article 824.

SUBSTITUTES FOR GUM-ARABIC.*

The difficulties of obtaining genuine gum-arabic, and the consequent high prices, have induced the importers to introduce into commerce numerous cheaper kinds of gums, which are more or less similar to the genuine gum-arabic. It is, therefore, desirable to examine the different sorts of spurious gum-arabic in relation to their qualities and suitability.

The *ghatti-gum* consists of more or less globular colourless or brownish-yellow wrinkled, rough pieces, the inside of which is clear and transparent. They form with three parts of water, correspondent to their purity, a pale yellow, or more or less brownish, semi-solid, very adhesive substance, which, in aqueous solution, is precipitated by subacetate of lead, coagulates when treated with borax, and becomes faintly turbid by oxalate of ammonia. On incineration it yields a residue of 2·53 per cent. of ash, principally consisting of carbonates of potassium and calcium, with traces of sulphates. The ghatti-gum makes good, persistent, nice-looking emulsions, and seems

* *Zeitschrift d. Oesterreich. Apotheker-Vereines und Der Fortschritt*, No. 14, July 22, 1888.

to be the best substitute of gum-arabic for pharmaceutical purposes, in consequence of which its price has lately been doubled.

Amrad-gums, the principal kinds of which in commerce are—*East Indian amrad, glassy amrad*, and *pale amrad*.

The *East Indian amrad* represents small, globular or polygonous reddish pieces, forms with water a yellowish or brown tasteless mucus, which is less adhesive than gum-arabic, and makes with oil yellow emulsions. Its aqueous solutions are not coagulated by borax ; subacetate of lead forms thick opaque ; oxalate of ammonia only very faint precipitates ; chloride of iron produces a dark colour.

Glassy amrad forms large, mostly globular, faintly lustrous yellowish or dark-brown pieces. The aqueous solution (1·3) is tasteless, of yellow to reddish-brown colour, and readily forms emulsions with oil. Subacetate of lead produces only very weak, non-gelatinous precipitates ; borax, on the contrary, converts the solution into a jelly ; chloride of iron colours it brown ; alcohol and oxalate of ammonia give a firm white precipitate.

Pale amrad occurs in small globular pieces with, sometimes, opalescent surface. The solution is pale yellow or brownish, and readily forms with oil almost colourless emulsions. In solution, a thick, opaque precipitate is formed by subacetate of lead, and a white precipitate by oxalate of ammonia, by chloride of iron, and by alcohol.

Oomra-Whatti gum is brought into commerce in differently shaped, dark, internally transparent, externally dull-yellow or reddish lumps, which form with water a dark-coloured, very adhesive mucus, which with oil readily makes emulsions. Subacetate of lead will not produce precipitates, but alcohol and oxalate of ammonia will do so. Borax converts the solution into a jelly, chloride of iron imparts to it a dark colour.

All the kinds of amrad-gum, which leave about 5·61 per cent. of ash, are only suitable for technical purposes. The opinions about the original plant which yield these gums differ. Ainsley considers both the *Acacia arabica* and the *Feronia elephantum* as the original trees, whilst Birdwood names, besides the latter, the *Mangifera indica*, the *Azadirachta indica*, the *Terminalia bellerica*, and others.

The *Dhaura gum* consists of almost colourless pieces, which are of the taste of genuine gum-arabic and form with water a likewise colourless solution of peculiar smell. It is obtained from the *Anogëissus latifolia*, a tree very common in East India, where it is employed for dying purposes.

Besides these different kinds of gums which are imported from East India, the Brazilian *Para-gum* is now likewise brought into commerce as a substitute for genuine gum-arabic.

Ferd. Adalb. Junker, M.D.

Article 825.

WEISSENBERG ON THE ADVANTAGES OF COMBINING MASSAGE WITH SOL BATHS (SOLBÄDER).

Dr. Weissenberg, of Kolberg, advocates the use of massage along with Sol baths (*Deutsche med. Zeitung*, No. 43). Sol baths admittedly accelerate and stimulate the change of matter in general, and in particular effect an increased metamorphosis of the nitrogenous tissues. Further, besides more quickly eliminating the products of metamorphosis they cause a more rapid formation of healthy tissue. Now, massage by hastening the removal of lymph and venous blood from the periphery to the centre tends to increase and accelerate resorption. So that both these methods of treatment rest on nearly the same physiological principles. Mosengeil proved that massage is an excellent means of furthering resorption by the following experiment. With a Pravaz syringe he injected into various joints of rabbits finely pulverised black Indian ink, and then massaged some of their joints, whilst for the sake of comparison he left the others untouched. The result was that after massage the swelling always rapidly vanished, and on opening the joints, even immediately after the massage, he found none of the injected substance, or only a comparatively small quantity. With the microscope he could trace the injected Indian ink up to the lymphatic glands. In the joints that had not been massaged, on the other hand, he found that, after an equal interval of time, the Indian ink had not entered the tissue of the synovial membrane.

From Mosengeil's experiments it is evident that in the massage treatment the lymph-passages must be regarded as chiefly concerned in the increased resorption. At the same time the accelerated circulation in the veins of the skin plays a not unimportant part by giving a new impetus to the blood-current, and by its backward effect on the capillaries and arteries. In this way massage, on the other hand, causes the matter that is to be resorbed to be forced out of the tissue interstices into the lymph-passages, and effects simultaneously a more rapid circulation in the blood-vessels, both very essential factors in furthering and accelerating resorption. If, therefore, massage be combined with Sol baths, the effect must evidently be considerable. This is of particular importance when a disease arises from exudations or extravasations of any kind, or from the thickening of tissues, hyperplasia, adhesions, or any products of inflammation that can without injury be taken up into the general circulation. Proceeding to give the results of his practice, Dr. Weissenberg first says that he has not had to deal with recent exudative affections, such as contusions and distortions, which empiric masseurs treat so wonderfully ; but he has only had old chronic cases, which demand more patience and perseverance, as well as a careful consideration of the general health. Weissenberg confesses that he learned the *technique* of massage from an intelligent patient of his, a man of thirty, who had been treated with massage by Metzger, of Amsterdam, for a chronic rheumatic swelling of the knee. This had been in the winter, and now the patient came in the summer to Weissenberg, hoping that the good effects could be increased in summer. Under the patient's direction Weissenberg massaged him for a long time morning and evening after the bath. In eight weeks he had the pleasure of seeing his patient completely restored. In cases of chronic rheumatic swellings of joints of a serous character, Weissenberg now begins with warm Sol baths and bandages, in order to facilitate the passage of the fluid that is to be pressed out. After this, the first massages effect a considerable decrease of swelling in the round joints. The case is different when there are fibrinous inflammations of the joints. Here the limb is often completely stiffened. The numerous cells of the

originally fluid exudation permeate the surrounding cellular tissue and the sheaths of the muscles and tendons to such an extent that the lymph-channels are completely stopped up, and thus atrophy of the infiltrated parts is a necessary consequence. The longer the inflammation continues, the more the cellular and fibrinous contents increase, so that eventually the surrounding parts of the joint all grow firmly together. In such cases the first thing to be done is to dilate the plasmatic channels and the lymph-vessels, so that the infiltrated masses may escape. To accomplish this, the hot Sol douches are peculiarly adapted, as they mostly cause increased disturbances of the juices and acute fluctuation in the stiffened joints. In many cases their massage will help to carry off the loosened particles through the newly-opened passages, and eventually restore to the joint its pliancy.

A young lady, aged 24 years, otherwise healthy, had a white swelling on the left knee, the cause of which was unknown. She had been in bed for months, and gradually there had taken place complete angular ankylosis of the joint, which had at length to be forcibly straightened. Weissenberg found the leg indeed straight, but the knee-joint was immovable, the surrounding parts being as hard as bone and the contours unrecognisable. Great pain was caused by any attempt to put down the foot, as well as by any active or passive movement. He prescribed, first, hot Sol baths and temperate Sol water bandages, hot irrigations and very warm strong Sol douches being given during the baths. Very gradually the hard, formless surroundings of the joint yielded, and the cutis showed increased fulness of the vessels. In a week massage was done very cautiously once or twice a day for only a few minutes, and later on three times a day up to half an hour, the baths, dressings, and douches being continued in the meantime. In ten weeks the patient, who had till then been watched continually, could walk, leaning on the arm of the attendant or on a stick.

Cases of protracted callus formation, with stiff infiltration of the soft parts following on serious fractures of the bone, yield much more easily and quickly to the combined method. Here the massage is intended to supply passively the place of the muscular action and to direct the engorged lymph to the centre. Chronic tendovaginitis, particularly in the fingers, may be advantageously treated by the combined method.

The same may be said of chronic rheumatic muscular inflammations, *e.g.* the affections of the deltoid and serratus, as well as of inveterate lumbago and torticollis. Myositis is often difficult to diagnose. Its characteristic feature is the peculiar feel of the muscles, the consistency having been changed. (Mosengeil calls it a 'jelly-like stiffening.') It affects particularly the muscles of the back and of the thighs. Kneading after Sol baths, combined with so-called passive gymnastics, is certain to cure it, as Weissenberg has found in two cases.

In nervous diseases, massage can only be expected to be of advantage if the affection has a peripheral origin, and then especially when the cause is engorgement of the lymph in the lymph-passages surrounding the different nerves. Particularly effective is massage in neuralgia of the ulnaris and trigeminus. Weissenberg has found the combined method to be especially successful in sciatica. He also mentions cases of writers' cramp and pianists' cramp, which he thus cured. After mentioning spinal complaints in children, habitual constipation, varicose veins in the leg, and scrofulous swellings of the glands, he devotes considerable attention to exudation in the female pelvis. The Sol bath has ever been considered to be the best method of treating such cases, and he has found that by applying massage in combination with it the cure has been rendered more rapid and radical, even in cases where stiff masses or cicatricial contractions have been produced by perimetritis, or parametritis, perioöphoritis, and salpingitis. Pelvic massage must, however, never be done while there is still fever, implying continuance of the inflammatory process. It requires much experience, practice, and care. Weissenberg describes his own method thus. There are two initial difficulties to be overcome in applying massage in cases where there are cicatricial contractions in the perimetrium or parametrium—viz., firstly that the operator soon grows tired; and secondly, that it is sometimes impossible to reach high enough into the vagina in order to sufficiently press and rub down the hard exudations. To get over these difficulties Weissenberg used the speculum-plugs in different sizes. These take the place of the finger, which so soon grows tired, and press the cicatriced tissue with much greater precision against the massaging hand. But first the hard exudations had better be softened by hot Sol water irrigation, dressings, and baths, and then should be massaged daily for from 15 to 20 minutes. Nearly all cases, except exceedingly old ones, are materially benefited by the combined treatment. In cases of chronic perityphlitis or paratyphlitis stercularis there is often an exudation in the retroperitoneal connective tissue, which, though no actual abscess is formed, may be very obstinate, and assume the appearance of a larger or smaller tumour. A military surgeon acquired in 1875 perityphlitis during manœuvres. In 1877 he had a second attack in the summer and a third in the autumn. Ever since he had had a constant pain in the ileo-cæcal region after any exertion, but especially after stooping. There was a feeling of heaviness in that part, and he thought he felt a tumour. Weissenberg found in the ileo-cæcal region a tumour, the size of a goose's egg, corresponding with the course of the colon ascendens. Saline water was given in great quantities, and, after a bath, a compress was applied to the right side of the abdomen for several hours. When the tumour ceased to give pain on pressure the region of the tumour was gently rubbed round in the bath, and this was followed by warm irrigation of the left side. The tumour grew softer and smaller, diarrhœa set in, and large masses of blood-tinged mucus were voided. Since then there has been no relapse. A similar case was that of a Dublin medical man. In conclusion, Weissenberg says that massage offers no insuperable difficulties as to *technique*, and if medical men cannot spare the time it requires, they can easily train assistants to do the work. If empirics can perform such wonders with massage, he asks, what might not be accomplished were the medical profession to take it up more generally?

John Elliott.

The Juice of Cineraria Maritima in Cataract.—The juice of cineraria, a plant growing in Trinidad, is said by a Spanish practitioner, Dr. Mercer, to have a remarkable curative power in cataract. Dr. Mercer was himself the patient, and testifies to its remedial power in his own case.

Article 826.

NEUDÖRFER ON THE THERAPEUTIC APPLICATION OF CREOLIN.

Dr. J. Neudörfer, of Vienna, contributes a paper to the *Med. Chir. Centralbl.*, No. 28, 1888, on creolin. He says that creolin manufacturers have a good reason for not divulging the secret of the chemical composition, in as far as it is a secret hidden from themselves. It is true that creolin does not contain a particle of carbolic acid, the test for which is extremely sensitive; for a solution containing but one two-millionth part of carbolic acid, on being boiled with Millon's reagent (a solution of nitrate of mercury which contains a nitrous acid), shows a yellow precipitate, which is dissolved in nitric acid, taking a deep red colour. But though there is no carbolic acid in creolin, it would not be safe therefore to conclude that the latter is absolutely non-poisonous, since gas-tar yields many other poisonous substances besides carbolic acid—*e.g.* aniline, fuchsin, mauvin, safranin, &c. To throw light on this subject, Neudörfer has made experiments on animals. The first such was made on a curarised and tracheotomised dog, the venous pressure being gauged. The registering apparatus was fixed in the carotis, and the blood-pressure was found to be 55 millimètres Hg. Then about one gramme of undiluted creolin was injected into the jugular vein, when the pressure at once sank to 44 millimètres Hg. The blood-pressure continued to sink slowly, and in six minutes was but 34 millimètres. Another gramme of creolin was then injected into the jugular vein, and the blood-pressure dropped rapidly to 22, and the dog died. In the next experiment the dog was neither curarised nor tracheotomised. This time the crural artery and vein were laid bare, the registering apparatus being fixed into the former. After the animal had become quiet the average blood-pressure for some minutes was 130 millimètres Hg. A gramme of creolin was then injected into the crural vein. This caused great pain, and brought on clonic spasms, which corresponded with the great fluctuations of pressure registered by the apparatus. The pressure sank at once from 130 to 100, and then showed the following fluctuations: 180, 160, 140, 210, 130, 200. In fifteen minutes the spasms ceased, and the average pressure was again 130. On the injection of another gramme the blood-pressure jumped up to 190, and then fell at once to 106. The spasms caused fluctuations only between 110 and 130. In five minutes a third injection caused the pressure to sink suddenly, and the animal died. A few minutes after death the thorax and the abdominal cavity were opened. The inordinate fulness of the heart was striking. It was not the stopping of the heart in diastole, but a strong, active dilation of the organ, that had so stretched the pericardium on one side that it was difficult to grasp it in a fold so as to make an incision. Similarly surcharged with blood and distended were the liver and the kidneys. The spleen presented an appearance quite in contrast with the other organs, being pale, thin, and bloodless, with its capsules wrinkled. For some minutes after death there were regular quivering movements in the muscles situated under the pleural covering. The following points are evident from these experiments:—

(1) Intravenous injection of the drug has a poisonous effect.

(2) A dose of 0·5 gramme to every kilo of body weight, or of 1 cubic centimètre to every 500 cubic centimètres of blood, causes death.

(3) From the violent general spasms, the restlessness and pain of the animal, the surcharging of the heart, liver, and kidneys with blood, and from the profuse salivation, it may be concluded that creolin intensely irritates the sensible, motory, and sympathetic nerves as well as, probably, the nerve-centres and ganglia. Neudörfer does not know of any conclusion to be drawn from the anæmic and wrinkled condition of the spleen.

But the danger of poisoning must not prevent the use of the drug, which, as an antiseptic, is preferable to carbolic acid, salicylic acid, iodoform, or sublimate. In a concentration of from 1 to 5 per mille, creolin may be applied to a wound without fear of poisoning, whilst it does not blunt the feeling of the operator's hands nor the edge of his instruments. It has no disagreeable smell, and there is no danger of poisoning from mistaking the drug. It possesses the following positive virtues: Purulence is dried up by its touch, and it leaves on the bandages merely some yellowish-green serum. It is, therefore, a drug that circumscribes and dries up purulence—a matter of great moment to the surgeon. It further exercises a conserving effect on elements that have been formed, neither dissolving nor wrinkling them; it seems rather to render the intercellular fluid more viscous. To this property, as well as to its action on the vaso-constrictors, it owes its hæmostatic character. Much remains to be discovered concerning the details of its action, but generally speaking it may be termed an alterative medicine, because of its effect on the sensitive, motory, and sympathetic nerves, as well as, probably, the nerve-centres.

John Elliott.

SURGERY.

RECENT PAPERS.

827. Karpetchenko, Dr. Vladimïr M.—Case of Radical Operation for Hydronephrosis. (*Proceedings of the Caucasian Medical Society*, No. 18, 1888, p. 566.)

828. Rein, Professor Ghëorg E.—Hydatid of the Omentum in a Pregnant Woman; Laparotomy; Complete Extirpation; Recovery. (*Jïurnal Akïusherstva*, &c., No. 2, 1887, p. 115.)

829. Zesas.—On the Results of Resection in Cases of Arthritis Deformans. (*Deutsche Zeit. für Chir.*, Band xxvii., Heft 5 and 6.)

830. Lucas-Championnière.—On Arthrectomy and Resection.

831. Morton.—On Removal of the Vermiform Appendix in Cases of Pericæcal Abscess.

832. Witte.—On a Case of Gastrotomy for the Removal of a Fork. (*Journal of the American Medical Association*, June 16, 1888.)

833. Alberti.—On Extirpation of Meningocele.

834. Blum.—On the Treatment of Rupture of the Bladder. (*Archives Générales de Médecine*, July.)

835. Carle, A.—On Resection of the Pharynx. (*Gazzetta Medica Italiana*, July 28, 1888.)

836. D'Autona, Prof.—On Two Cases of Hydatid of the Liver treated by Operation. (*Gazz. deg. Osp.*, June 1888.)

837. Thompson, S. M.—Urethral Calculi removed by Dilatation from the Female Urethra. (*Dublin Jour. of Med. Science*, July 1888.)

838. Ormsby.—On the Radical Cure of Varicose Veins. (*Med. Press and Circular*, July 1888.)

839. DERLON, DR.—On a Means of Obviating the Pain in Hypodermic Injections of Antipyrin. (*Rev. Gén. de Clin. et de Thérap.*, July 12, 1888.)

840. GAUTHIER, DR.—On Cocaine as a Local Anæsthetic. (*Rev. Gén. de Clin. et de Thérap.*, July 15, 1888.)

ART. 827. *Karpetchenko on Laparotomy for Hydronephrosis.*—At a recent meeting of the Tiflis Medical Society, Dr. Vladimïr M. Karpetchenko, of the Tiflis Military Hospital, showed (*Proceedings of the Caucasian Medical Society*, No. 18, 1888, p. 566) a soldier, aged 26, cured by him of hydronephrosis. The patient, of medium size and make, had been admitted about three and a half months before in a state of extreme emaciation and prostration, with an enormously distended abdomen, accelerated pulse and breathing, loss of appetite, slight fever, listlessness and mental depression. On examination the abdomen proved to be extremely tense, and distended more on the left side than on the right. The left lumbar region was markedly full. The palpation could elucidate only the presence of some fluctuating, uniformly smooth tumour, which filled up the whole abdominal cavity from the (pushed upwards) diaphragm down almost to the pubes. An exploratory puncture (by a hypodermic syringe) drew out a transparent yellowish fluid containing neither morphological elements nor succinic acid, but a very large amount of albumen. The patient's state rapidly and steadily growing worse, Dr. Karpetchenko opened the abdomen on the left side, by a longitudinal incision running at a couple of finger-breadths from the median line and admitting four fingers, to determine the nature of the tumour. The latter proved to be an enormous cyst growing out on a broad base from the left posterior abdominal wall, where 'it was apparently somewhat fixed by adhesions, though it could be still moved, to a certain limited degree, in all directions.' Having arrived, by way of exclusion, at the conclusion that he had to deal with hydronephrosis of the left kidney, Dr. Karpetchenko decided to continue the operation after Volkmann's method, at two stages. Accordingly he stitched the omentum (which covered the cyst) to the skin on both sides of the abdominal wound, while in the angles of the latter he fixed to the skin both the omentum and the wall of the tumour, after which procedure the wound was plugged with iodoform gauze and dressed antiseptically. Seven days later, he proceeded to split up the omentum and subjacent cyst by an incision admitting a thumb. About fourteen or sixteen pints of a clear, light yellow fluid (containing a profuse quantity of urea) escaped, and a considerable bleeding from the omental veins followed, which, however, could be controlled without much trouble. Having washed out the cavity of the cyst with a salicylic lotion, he introduced a thick drainage-tube and applied an antiseptic dressing. The after-treatment consisted in daily changing the dressing and washing out the cavity with a ½-per-cent. salicylic solution. Beyond a fairly intense eczematous rash around the abdominal wound, the after-course presented nothing abnormal. The cavity of the cyst rapidly shrunk, while the patient's state improved from day to day. On the thirteenth day after the second stage of the operation the drainage-tube was removed. A few days later the wound closed completely, and the patient was discharged quite well, in which state he remained up to date.

828. *Rein on Laparotomy for Hydatids of the Omentum during Pregnancy.*—At a meeting of the Kiëv Medical Society, Professor Ghëorg E. Rein, one of the most eminent Russian laparotomists, related (*Jïurnal Aküsherstva*, &c., Fasc. 2, 1887, p. 115) a very remarkable case of this kind. A rather anæmic but still fairly strong married cook, aged 25, was admitted to his obstetrical clinic in the third month of her third pregnancy with complaints of severe pain about an abdominal tumour, which had been first noticed by her about six years before admission, or two years before her first labour (premature still birth). When examined by the author shortly after her second labour (which had taken place a year after the first, and been quite normal in all regards), the tumour had the size of a male fist, was quite painless, and generally did not cause any inconvenience to the patient. But of late the tumour (which had been gradually increasing ever since) became very painful, especially after any heavy work or on straining her abdominal muscles, while there appeared an irregular fever, rigors, mental depression, and headache. On the examination under chloroform there was found an extremely movable, elastic, fluctuating, knobby, ovoid tumour, measuring 9 × 7·8 centimètres. As a rule, it was felt about the navel, but could be easily displaced under the ribs on both sides, and from there downwards to the inlet of the pelvis. No connection with the womb could be made out. Either an ovarian cyst with a very long pedicle, or a new growth of the omentum or mesentery was supposed, and median abdominal section performed. The incision measured 12 centimètres (6 above, and 6 below the navel). The white, uneven, tense tumour immediately presented itself into the abdominal wound and could be easily extracted (together with adherent omentum) as a whole, without previously diminishing its size by puncture. The omentum covered only a larger moiety of its surface, and at a spot formed a kind of pedicle as broad as about a palm's breadth. The pedicle was not very vascular, and could be without any trouble divided into two portions, ligatured, cut through, and dropped into the abdomen. The operation (including closing the incision) lasted only nineteen minutes, the abdominal cavity remaining open not more than for seven. The exact nature of the cyst removed was recognised only after the latter had been split up with a knife, when there welled out a characteristic transparent fluid with about a hundred hydatid bladders, varying in size from a pin's head to a hen's egg. The maternal cyst was unilocular and had very dense and easily breakable walls, measuring from 1 to 3 centimètres in thickness. Its internal surface was smooth, but the external one extremely firmly adherent to the omentum by means of old false membranes of a peritonitic origin. The temperature after the (antiseptic) operation never rose above 37·4°C. On the fourteenth day the woman got up; on the twentieth was discharged well, her pregnancy advancing towards its normal termination. Professor Rein draws attention to the following points of practical interest: 1. The case above represents a most certain instance of a hydatid cyst of the omentum, in which regard the case stands yet alone in the laparotomic literature, since in all other preceding cases described as those of omental echinococci and treated with abdominal section, the assertion was based only on a more or less probable supposition, the exact original site of the cyst remaining after all uncertain or problematic. Of

sixteen cases of laparotomy for so-called 'hydatids of the abdominal cavity' (leaving aside hydatids of the liver, spleen, kidneys, &c., and taking into consideration only the omentum, mesentery, parietal, peritoneal, sub-peritoneal cellular tissue, &c.), which were published by Spencer Wells, Lawson Tait (3), Knowsley Thornton, Geissel, Witzel-Trendelenburg, Freund, Olshausen (2), Annandale, Péan, Schroeder, K. F. Slavïansky, Wilde, Rings-Veit—the omental origin of the cyst is (thought to be) most probable in those of Wilde and Witzel-Trendelenburg. [In Dr. Astashevsky's case (*vide* LONDON MEDICAL RECORDER, July 20, 1888, Art. 670) the diagnosis was similarly only problematical.—*Rep.*] 2. Rein's case is that of a *solitary* echinococcus of the abdominal cavity. According to Neisser, Péan, and Witzel, abdominal hydatids are multiple in an overwhelming majority of cases. 3. An ideally-complete removal of the cyst, and that with best possible results, proved feasible in Rein's case. In this regard (as well as in some other features) Rein's case resembles that of Knowsley Thornton, who has excised the whole cyst (in a pregnant woman) together with the (ligatured) omentum. The same procedure was practised once by Péan and twice by Olshausen in cases of mesenterial hydatids. In the remaining cases of echinococci of the abdominal cavity [except Fitzgerald's — *Rep.*] the cyst was split up, stitched to the abdominal wound, and drained. 4. In Rein's case as in all others, the diagnosis could be established only after opening the abdominal cavity. A puncture was not resorted to, in view of a consecutive suppuration of the hydatid cavity which had taken place in Annandale's case, as well as in view of Freund's two cases of pelvic hydatids, which had ended in death after an exploratory puncture. In common with Freund and Hegar, Professor Rein earnestly warns against this procedure. Basing his views on the extreme difficulty, and occasional impossibility, of a correct diagnosis in cases of abdominal hydatids, and, on the other hand, on the necessity of an early surgical interference in cases under consideration, he lays down the following propositions: 1. In all cases of abdominal tumours, laparotomy must be resorted to at the earliest possible stage of their development. 2. To prevent any contamination or infection of the peritoneal cavity, small-sized and freely movable abdominal tumours, especially those of a suspicious character, should be removed as a whole, without previously diminishing their size by puncture. It is by far more advantageous to enlarge the abdominal wound for the purpose if necessity arises. 3. In cases of omental hydatids an attempt should be made to remove the cyst as a whole, either by extirpation, or, still better, by resection or amputation of the omentum. 4. The latter can be regarded as one of those few structures (such as skin, subcutaneous cellular tissue, muscle, &c.) which allow a most thorough (radical) removal of hydatids. 5. Pregnancy does not contra-indicate any laparotomy, including that for removal of abdominal echinococcus. [In the LONDON MEDICAL RECORD, August 1880, p. 323, there may be found a most striking and instructive case of an enormous hydatid of the omentum and liver, recorded by Dr. T. N. Fitzgerald, of Melbourne, who has extirpated the whole parent-cyst, the woman making a good recovery.—*Rep.*] V. IDELSON, M.D.

829. *Zesas on the Results of Resection in Cases of Arthritis Deformans.*—In a paper on Resection of the Hip-joint for Arthritis Deformans, Dr. Zesas, of Bern, in some comments on an original case in which this operation was performed by Dr. Niehans, and on three other cases previously recorded by Fock, Küster, and Riedel, discusses the prospects of resection in such instances with regard to the relief of pain, freedom from relapse, and the functional capacity of the limb. There seems to be good reason for asserting that the pains which cause so much distress in coitis deformans will be removed after resection, and reference is made by Zesas to permanent and complete relief of pain after resection of the elbow-joint for arthritis deformans. The results of the resection of the hip performed by Dr. Niehans two years and a half ago, and those of like operation on other joints affected with arthritis deformans, show that there is no tendency to a recurrence of this disease after such treatment. With regard to the functional results of the operation, on the other hand, the prognosis is very unsatisfactory, since in three of the cases of resection of the hip in which reports have been given of the subsequent condition of the patients, the limb was too weak to sustain the weight of the body, and locomotion could not be effected without the use of crutches or some other means of support. It remains for subsequent and more abundant experience to determine whether such unfavourable results be due to the advanced age of the subjects of coitis deformans or to the nature of the affection itself, which may possibly prevent the development of a serviceable joint.

830. *Lucas-Championnière on Arthrectomy and Resection.*—At a meeting of the Société de Chirurgie of Paris on March 23, M. Lucas-Championnière argued that whether with regard to functional results, to freedom from risk, or to efficiency, arthrectomy has no real superiority over resection. Surgical intervention restricted to the synovial membrane does not seem, it is stated, to have given hitherto satisfactory results. If it be true that the lesions of tubercular arthritis are usually confined to the synovial membrane to the exclusion of the bones, it is granted that one might up to a certain point look with favour on the partial operation which attacks only the soft parts and respects the skeleton. In twenty out of twenty-one cases, however, in which M. Lucas-Championnière has performed resection, in every instance with good result, there was found to be osseous tuberculosis. Allusion is made to the difficulty of removing all the diseased synovial membrane, and it is held to be impossible in dealing with the knee, unless bone be removed, to explore the whole of the affected joint, or to follow the fungous growths into the numerous spaces in which they exist, behind the ligaments, behind the bones, and particularly behind the posterior surface of the tibia. The same objections apply to cases in which the patients are infants, for with these tuberculosis of the osseous elements of the diseased joint is the rule. It is held that if the functional results of the two operations be considered, arthrectomy has no advantage over resection. Both operations are followed by a stiff limb. Arthrectomy, it is true, does not result in shortening of the limb; but this, M. Lucas-Championnière holds, is no advantage. Resection is strongly advocated in cases of tubercular arthritis as being the only operation which insures complete removal of the disease.

831. *Morton on Removal of the Vermiform Appendix in Cases of Pericæcal Abscess.*—In a

paper on the Diagnosis of Pericæcal Abscess and its Radical Treatment by Removal of the Appendix Vermiformis, read at the last annual meeting of the American Medical Association, Dr. Thomas G. Morton, of Philadelphia, alluded to the brilliant results of laparotomy in cases of suppurative appendicitis, and advocated free exposure of this process in all cases of abscess in the ileo-cæcal region, and its removal when diseased. Pericæcal disease, it is stated, may in most cases be regarded as disease of the appendix vermiformis, since recent pathological researches have demonstrated that, as a rule, in cases presenting the well-recognised characters of typhlitis, the symptoms are almost invariably due to appendicitis. In any ileo-cæcal abscess disease of the appendix, it is held, should always be suspected, and an effort always be made to expose this organ. In no case should a simple evacuation of pus be considered sufficient, especially if the history present any account of previous appendix trouble. A case of this character came under Dr. Morton's care two years ago, in which he simply evacuated an abscess situated in the ileo-cæcal region, and made no investigation of the appendix. Recently he was obliged to perform abdominal section, and to remove the appendix, disease of which undoubtedly existed at the time of the first operation. In the operative treatment of pericæcal abscess Dr. Morton advocates a lateral incision, beginning at a point about an inch above the middle of Poupart's ligament, and to the outer side of the right linea semilunaris. This is continued directly upwards, or upwards and outwards, and carried down until pus, cæcum, or peritoneum may be exposed. After a clear view has been obtained of the cæcum and its appendix, it would be well, Dr. Morton holds, to excise the latter in any case, and, without a doubt, it should be so treated if found inflamed, perforated, or harbouring foreign bodies. This can best be accomplished by applying a strong silk ligature as close as possible to the cæcal attachment of the appendix, and then cutting this process away beyond ligature.

832. *Witte on a Case of Gastrotomy for the Removal of a Fork.*—In the *Journal of the American Medical Association*, June 16, 1888, Dr. Max E. Witte, of Mount Pleasant, Iowa, has reported a case in which a heavy fork was removed from the stomach of a maniacal woman, aged thirty-one years. The fork, which was seven and a half inches long and provided with four prongs, had been swallowed on Sept. 13, 1887. Early in December a very painful tumour of the size of an orange was detected in the abdominal cavity to the left of the umbilicus. Subsequently a hard and pointed body could be felt in connection with this tumour. On Dec. 16 Dr. Witte performed the following operation:—An incision three inches in length was made in the abdominal wall parallel to the curve of the costal cartilage on the left side, and directly over the foreign body. The four prongs of the fork were found protruding through the anterior wall of the stomach near the greater curvature. The stomach was opened, and the fork liberated and removed. As there were some adhesions of the stomach to the abdominal wound the edges of the gastric wound were stitched to the wound in the abdominal wall by a double set of sutures. During the operation and subsequent dressings strict antiseptic precautions were observed. The wound healed rapidly and along its whole length, and the patient made a good recovery.

833. *Alberti on Extirpation of Meningocele.*—At the last Congress of the German Surgical Society, Dr. Alberti, of Potsdam, reported a case of successful extirpation of a meningocele in the occipital region. The patient was an infant, 8 weeks old, with well-formed and well-developed trunk and extremities, but presenting at the back of the head a congenital fluctuating but non-pulsatile tumour of considerable size, which communicated with the intracranial cavity by a rounded pedicle. The skin covering this growth was normal and covered by abundant hair. The infant's head was enlarged in consequence of hydrocephalus which was clearly indicated by wide fontanelles and very open sagittal, coronal, and lambdoid sutures. On compression of the tumour the child became somnolent, its breathing very irregular, and its face pallid. Having decided to operate, with strict antiseptic precautions, for the removal of the tumour, Alberti first punctured and withdrew 230 grammes—about half its fluid contents—of a clear amber-coloured fluid. The pedicle having been compressed by Hahn's intestinal clamp in order to prevent egress of the fluid from the interior of the skull, the skin was incised around the pedicle just beyond the seat of compression and afterwards dissected back, until the tumour could be followed as far as a narrow cleft, about half an inch in length, that was situated in the middle line of the occipital bone a little below the protuberance. A silk ligature was fixed around the pedicle at this point and the whole tumour then removed. The infant at once became much asphyxiated, but recovered after having been wrapped in hot cloths. The edges of the wound in the skin were brought together by sutures and a dressing of sublimated wood-wool was applied over the seat of operation. The infant did not suffer from any bad results after this treatment and progressed favourably for two weeks, but subsequently became thin and presented indications of rapid and considerable increase of the hydrocephalus.

834. *Blum on the Treatment of Rupture of the Bladder.*—In an original memoir contributed to the July number of the *Archives Générales de Médecine*, Dr. A. Blum has reported a case under his own care of intra-peritoneal rupture of the bladder with peritonitis successfully treated after an interval of forty hours, by laparotomy and suture of the wound. Of twelve recent cases—eleven collected from English and German sources—in which laparotomy was performed for intra-peritoneal rupture, six ended in recovery and six in death. In the table of collected cases published by Bartels in 1878, ninety-three out of ninety-four cases were fatal. The following conclusions are given by Dr. Blum at the end of his paper. 'The surgeon, in dealing with a case of certain or supposed rupture of the bladder, ought not to hesitate to incise the linea alba as soon as possible, in order that he may make out precisely the seat and extent of the lesion. If the laceration is seated near the base of the bladder—that is to say, if the peritoneum be not involved, perineal cystotomy will be indicated. In cases of intra-peritoneal rupture the edges of the wound in the bladder should be brought together by sutures, and the 'toilette' of the peritoneum be performed without subsequent drainage. The best kind of suture, and the only one that has been successful in man, is that of Lembert (sero-muscular suture, not including the mucous membrane). When, in consequence of

its situation and extent, the wound cannot be united, it should be sutured, if possible, to the abdominal wound, or drainage should be effected, according to the practice of Socin, by an artificial perineal wound. The existence of peritonitis at the time of operation is not a contra-indication to stitching of the wound in the bladder. Still the earlier the performance of laparotomy the better are the chances of success.

W. Johnson Smith.

835. *Carle on Resection of the Pharynx.*—At the June meeting of the Royal Academy of Medicine of Turin, Dr. Carle showed two patients upon whom he had performed the operation of resection of the pharynx for carcinoma, taking away the posterior and one of the lateral walls. The operation was performed after a method of his own, with a view of avoiding the disadvantages of the plans hitherto adopted—namely, the restricted space for operating and the secondary contraction of the jaws. The method adopted consists in an incision from the lobule of the ear vertically downwards to the anterior border of the sterno-mastoid, and from that a second parallel with the body of the lower jaw; then the lower jaw is disarticulated or resected. In this way sufficient space is obtained for operating, very little deformity remains, and the subsequent contraction of the jaws is avoided.

836. *D'Autona on Two Cases of Hydatid of the Liver treated by Operation.*—The first case was that of a student, aged 27, who had been in bad health for six months or more. There was a very large swelling on the right side, moving with the liver, and reaching downwards nearly to the crest of the ilium, and to the left much beyond the middle line. Febrile symptoms developed, and the diagnosis of a suppurating hydatid cyst was made. The most prominent part of the swelling was punctured with a large trochar, a counter opening was made 2½ inches distant, and a drainage-tube passed through between the two openings. A large quantity of sero-purulent fluid escaped, but in a few weeks the patient died. The next case related to a man of 30, who had had a swelling in the left lobe of the liver for five years. It had gradually increased. It was treated by a free abdominal incision. The tumour could be freely moved beneath the abdominal wall, and consequently it was contrary to expectation that the peritoneum was found to be adherent, and that the cyst was opened by the first incision. The contents were serous, and the cyst-wall was stitched to the margins of the abdominal wound. At the end of a week the remainder of the cyst came away through the wound, together with an immense number of daughter cysts, and in a very short time the patient was quite well.

H. Handford, M.D.

837. *Thompson on Calculi in the Female Urethra.* In the Section of Obstetrics of the Royal Academy of Medicine in Ireland, February 1888, Mr. S. M. Thompson exhibited two large calculi which he had removed by dilatation from the female urethra. Their surfaces were remarkably smooth. The patient was fifty-two years of age. She suffered for four months from incontinence of urine, and pain. A hardness was detected above the urethra; on the introduction of a probe a stone was discovered. Mr. Thomson dilated the urethra with a male dilator, and then tried to extract the stone with a small forceps. That instrument proved too weak. He then applied a large ordinary vaginal forceps, with which he was able to grasp and work out one calculus; a second calculus was extracted with greater ease. Immediate relief followed this operation, and the incontinence of urine ceased after two hours. Within a fortnight the patient was discharged quite strong and well. The dilatation was accomplished, without the aid of an assistant, as quickly as possible. Alban Doran.

838. *Ormsby on the Radical Cure of Varicose Veins.* In the *Med. Press and Circular*, July 1888, p. 10, Mr. Ormsby describes two cases in which he cured varicose veins by means of acupressure. A young farmer, aged 22, was admitted into the hospital under the author's care, suffering from extensive varicose condition of the veins of both legs. The patient was kept in bed two days previous to operation, and, on coming down to the operating theatre, was allowed to stand for a few minutes, so as to ascertain the exact course of the veins affected, the integument over them being marked with a coloured pencil. A pin was then passed deeply through the tissues behind the vein, and brought through the skin at the other side of the vessel; a small piece of bougie was then placed over and parallel to the vessel, and a loop of carbolised silk was then passed underneath the point of the pin at one side, then over the bougie, and so twisted from side to side over the bougie until the vein appeared to be completely occluded by the pressure of the pin behind and the bougie in front. Eight pins were passed in this manner from ankle to knee. A week later the other leg was treated in the same way; after three weeks the pins were removed, and the veins were found to be completely occluded. The various methods that have been adopted for the radical cure of varicose veins are:—1. The injection of the liquor perchloride or persulphate of iron, or a strong solution of tannic acid into the vein. 2. Tying the vein in different points along its course. 3. Cutting out portions of the vein. 4. The application of caustics. 5. Tying the vein at different points and dividing it subcutaneously between the ligatures. The author considers that the best procedure is the method by acupressure, and it is attended with the least danger to the patient. Richard Neale, M.D.

839. *Derlon on a Means of Obviating the Pain in Hypodermic Injections of Antipyrin.*—The effect of using aqua lauro-cerasi as the vehicle for the injection materially lessens the pain which usually follows the hypodermic injection of solutions of antipyrin—a somewhat unexpected result, seeing that it renders the pain of injecting solutions of morphine more intense. He employs the following formula: ℞ Antipyrin, 30 grains; cocaine hydrochloras, 1 grain; aqua lauro-cerasi, ʒi.

840. *Gauthier on Cocaine as a Local Anæsthetic.*—The author insists upon the fact that general anæsthesia is often resorted to when the desired effect would easily be obtained by simple subcutaneous injections of cocaine. He has used it in six cases of strangulated hernia, four cases of epitheliomata of the lips and ten of the face, four large sebaceous cysts, fifteen incisions of deep-seated abscesses, three in-growing toe-nails, two hydroceles, and two metacarpo-phalangeal disarticulations. In all the cases the patients 'hardly felt anything,' although in one instance the operation lasted over three-quarters of an hour. The number of injections varied according to the area of the part to be operated upon; generally one injection at each end sufficed, but when the incision was deep, the needle was also plunged deeply into the tissues. In operations on the limbs the local anæsthesia is accentuated by

using Esmarch's bandage. Insensibility was usually complete in about five minutes, and remained so for from twenty to thirty minutes. If necessary the injection can be repeated in the course of the operation. Cocaine is well borne by children.

ALFRED S. GUBB.

MEDICINE.

RECENT PAPERS.

841. SECRETAN, DR. H.—Treatment of Chronic Serous Effusions by Injections of Aseptic Air. (*Rev. Méd. de la Suisse Rom.*, No. 7, 1888.)

842. MARION, HORACE E.—On Pneumothorax (with Autopsy) in a Subject with Extreme Retro-lateral Curvature of the Spine. (*Boston Med. and Surg. Jour.*, May 31, 1888.)

843. GIVRE, M.—On a Case of Intestinal Obstruction Cured by Bergeon's Gaseous Enemata. (*Lyon Méd.*, July 22, 1888.)

844. LEJARS, DR.—On a Rare Case of Visceral Rheumatism. (*Bull. Méd.*, July 1, 1888.)

845. LINDEN, DR.—Acid Fermentation of the Urine. (*Finska Läkaresällskapets Handlingar*, Nov. 7, 1887.)

846. GOLDENHORN, DR. E. M.—Case of Merycism or Rumination. (*Rüsskaia Meditzina*, No. 4, 1888, p. 62.)

847. ROBINSON.—On Fugitive Œdema of Eyelids. (*Brit. Med. Jour.*, May 1888, p. 1006.)

ART. 841. *Secretan on Treatment of Chronic Serous Effusions by Injections of Aseptic Air.*—Dr. H. Secretan comments upon Professor Potain's statement that the presence of aseptic air within the pleural cavity is innocuous, and relates a remarkable case in which repeated effusions of serum took place after each operation of paracentesis. During the last tapping the upper part of the cavity was found to contain air, which escaped with a rush into the aspirator. The chest on this occasion was relieved of a far larger quantity of serum than had ever escaped before, and its place was taken by the air. Recovery then took place without any serious drawback, the pneumothorax disappeared, the lung expanded, and at the end of four months no sign either of air or of fluid could be detected in the pleural cavity. Dr. Secretan combats the notion that an effusion of air in the pleura is more to be dreaded than an effusion of fluid, and quotes another illustrative case of Professor Potain, in which effusion had taken place in the near neighbourhood of a patch of lung, the subject of tubercular disease. Simple removal of the fluid would probably have given rise to a pneumothorax and effusion of septic material into the pleura, causing empyema; or, if the lung were to have expanded, it would have been at the risk of aggravating the inflamed area and giving fresh impetus to the tubercular process. Under these circumstances, M. Potain had withdrawn the fluid by a cannula below, and at the same time injected antiseptic air above, thus permitting the whole of the fluid to be withdrawn, and preserving the lung intact either from rupture or expansion. The pneumothorax thus set up became fully absorbed in course of time. This procedure is advocated as the most rational method for adoption when repeated tapping has failed to afford relief, and when there is danger of rupture of the lung. By its means the chest can be more completely emptied, the lung is at any rate left no worse than before, and, with the gradual absorption of the air, is enabled gradually to expand if it be capable of expansion at all.

842. *Marion on Pneumothorax with Autopsy in a Subject with Extreme Retro-lateral Curvature of the Spine.*—Dr. Horace E. Marion (*Boston Med. and Surg. Jour.*, May 31, 1888) records the case of a clerk, aged 43, the subject of severe angular postero-lateral curvature of the spine of long standing, who was attacked with symptoms of pleuritis of the right side. This, after being neglected for four days, became extremely painful, the temperature rose, and effusion took place. A violent fit of coughing and choking gave rise to pneumothorax, and a few days later offensive pus was evacuated by tapping and subsequent free incision. The case went on well for two months, when pyæmic symptoms appeared, and offensive pus was brought up with the sputa after an unsuccessful attempt had been made to reach it again by incision. No acute symptoms ensued for nearly twelve months, although the patient had occasional night sweating and cough, with a slight loss of flesh. Abscesses then formed about the leg and pelvis, and the patient ultimately died, exhausted, with extensive bedsores. The autopsy showed extreme deformity of the chest, the right lung being compressed into small compass, and firmly adherent to the chest-wall, but containing a large abscess six inches by four inches in size within it. A sinus burrowing through inflammatory tissue communicated with the angle of the curvature, the component bones of which were rough and denuded. The chief points of interest of the case are the occurrence of pneumothorax as a complication of a (supposed) simple pleurisy, and the long intervals of comparative freedom from pyæmia, which the patient enjoyed. Details are wanting as to the exact relation between the spinal disease and the first attack of pleuritis. E. CLIFFORD BEALE, M.B.

843. *Givre on a Case of Intestinal Obstruction Cured by Bergeon's Gaseous Enemata.*—The patient was a lad, aged 14, of good general health, who had swallowed a chestnut whole. It first lodged in the œsophagus, but was subsequently dislodged, and passed on into the stomach. In a short time he was seized with violent epigastric pain, but this soon gave place to severe peri-umbilical colic. Vomiting soon set in, first alimentary, then of food, and finally fæcal (May 24), within twenty hours of the accident. Constipation was absolute, and no movement of the bowels could be obtained. On the 28th he was admitted to hospital. His abdomen was at that time enormously distended, tender, and painful, especially round the umbilicus. Tongue white and coated, but moist. Pulse small, quick, and rapid. Temperature, 100° F. On the 29th, two enemata of effervescing seltzer water were given by means of a long tube, and ice was applied to the belly. The vomiting, however, persisted. On the 30th the stomach was washed out by means of Fauché's syphon, with great relief to the patient and cessation of the vomiting. The symptoms, however, recurred, and it was ultimately decided to have recourse to gaseous injections, using the whole pressure of the gas. A considerable quantity of carbonic-acid gas having been introduced into the intestines, the distension of the abdomen increased, and the patient cried out with the pain and micturated involuntarily. The tube was withdrawn, and almost at once the patient

passed from six to eight litres of clear yellow water, of a most offensive odour, similar to the vomited matter. Rapid recovery then took place. The salient feature of the case is the employment of forced gaseous injections, which were successful after all other means had been tried in vain.

844. *Lejars on a Rare Case of Visceral Rheumatism.*—Mr. B., medical student, 27 years of age, strong and well built, has never suffered from anything beyond rheumatic pains in the shoulder. His family are markedly arthritic. Application to work had caused him to lose flesh, and on Jan. 16 he took cold. This was followed the same evening by intense headache, shivering, and a dry cough. He took to his bed, the throat was hyperæmic, and the abdomen slightly distended and tender. Temperature 102°·2 F. Four days later a well-marked herpetic eruption was seen on the anterior pillars of the fauces and on the right side, a spot the size of a sixpenny-piece with indented border surrounded by a number of vesicles. It was diagnosed as a case of herpetic sore-throat, but, far from falling, the temperature rose to 104°. On the 25th, Dr. Landrieux was asked to see the patient. The pharyngeal vesicles had burst and formed a greyish, yellow layer, spread out in irregular patches on the pillars. No glandular enlargement. The headache had disappeared and there was neither insomnia nor diarrhœa. Neither the tongue, the face, nor the prostration seemed to indicate dothinenteritis; but there were a few spots of doubtful appearance on the abdomen. The spleen was enlarged, the skin dry, and the temperature high. No improvement took place, the ulcerated throat, the pain and the sickness harassed the patient, whose complexion had assumed 'the earthy tint peculiar to infectious conditions. On the 31st, the temperature again rose, and a fresh crop of herpetic vesicles appeared on the buccal mucous membrane. On Feb. 3 an endopericarditis supervened, with a soft and prolonged systolic murmur, dyspnœa. In the course of a day or two, however, these alarming symptoms disappeared, but the bases of the lungs became painful to pressure and during respiration. The expectoration was viscid and streaked with blood. On the 10th, there was well-marked pulmonary congestion, on both sides, with albuminuria. This complication ran its course, with occasional relapses of great severity until March 15, when the patient began to rally. He was, however, only able to sit up for the first time on April 25, and it was several months before he finally recovered. The course of the malady, though erratic and confusing, was typically rheumatic, but throughout no joints were affected. The implication of one organ after another, the fugacious character of the complications, point to the rheumatic origin of the disease.

Alfred S. Gubb.

845. *Linden on Acid Fermentation of the Urine.*—Dr. Linden had a female patient, 42 years of age, married, who had for several years suffered from a sensation of distress in the hypogastrium, accompanied with frequent micturition. The urine was turbid and fœtid, and rich in *saccharomyces urinæ*. They were found to propagate under cultivation on potatoes. At the end of a fortnight, during which the bladder was daily washed with solutions of corrosive sublimate, 1 to 75,000, afterwards increased to 1 to 50,000, the saccharomyces disappeared, and the urine became clear. Dr. Linden saw the patient three weeks after this, when the cure appeared to be complete.

W. W. Ireland, M.D.

846. *Goldenhorn on a Case of Rumination in Man.* In the *Rüsskaia Meditzïna*, No. 4, 1888, p. 62, Dr. E. M. Goldenhorn, of the Odessa Town Hospital, details a curious case of merycism referring to a middle-sized, moderately nourished shopkeeper's assistant, aged 22, offspring of a healthy family, and himself in excellent health and spirits up to 16. At that early age he married a healthy girl and performed coition two or three times daily, day by day, for three successive years. About the commencement of the third year of his marital life he began to suffer from headache, swoons, weakness in all four limbs, general prostration, apathy, melancholic state of mind, and habitual rumination. The symptoms lasted for about three months and then subsided spontaneously, to reappear for one month two years later, and once more after a free interval of about a year and a half. When seen by Dr. Goldenhorn on the seventh week of his third attack, the man complained (in addition to the symptoms mentioned above) of incessant hunger, sexual impotence of three months' standing, and habitual constipation. 'About fifteen minutes after every meal of his,' the author says, 'the food ingested commences to rise up into his mouth, at first only in small portions, which are then again swallowed by the patient, so that the food travels from the stomach to the mouth and returns; but gradually the eructations become more and more frequent, while the amount of the food rising up increases to such an extent that the man finds himself unable to return the cud into his stomach. The cud also acquires an unpleasant, sour taste from its being mixed with the gastric juice, which circumstance in its turn prevents the patient swallowing so objectionable a substance. The whole meal is ejected in this gradual way in the course of two or two-and-a-half hours after its ingestion.' A careful examination failed to detect anything abnormal beyond a slight increase of the knee-reflexes and some dilatation of the stomach. The dilatation was observed apparently only after rumination. It is regarded by the writer (who generally shares Oser's views on the neurosis in question) as a manifestation of fatigue or atonic state of the organ, taking place after a preceding state of an increased (peristaltic) action. Dr. Goldenhorn's theory of the case is that merycism here has a neurasthenic origin, neurasthenia having been caused by the man's extraordinary sexual excesses. The patient is still under the writer's observation. V. Idelson, M.D.

847. *Robinson on Fugitive Œdema of Eyelids.*—In the *Brit. Med. Jour.*, May 1888, p. 1006, Dr. Robinson draws attention to the case of a lady, aged 46, who consulted him on account of a swelling of the eyelids and puffiness of the face. All her life she had been subject to stomach and head troubles, and had had many attacks of erysipelas of the face and head. The puffiness of the face and eyelids had been noticed for about three months; it was always worse in the morning, and lasted for two or three days; then it would go away until the next time a headache came on, when the eyelids again became puffy. There was no evidence of organic disease, and the kidneys were healthy. The author remarks that these cases are not uncommon, especially in women, during the menopause, and he has often met with people who, victims of periodical

headaches, suffer from a fugitive œdema of the eyelids. Richard Neale, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

848. Shoemaker, Dr. John V.—On the Imputations on Beta-Naphthol. (*Jour. of the American Medical Association*, July 14, 1888.)

849. Lackersteen, Dr. M. H.—On Glonoin in Collapse. (*Arch. of Gyn.*, July 1888.)

850. Derlon, Dr.—On the Use of Antipyrin associated with Quinine. (*Rev. Gén. de Clin. et de Thérap.*, July 15, 1888.)

851. Dujardin-Beaumetz, Dr.—Report on Saccharin. (*Revue de Thérap.*, July 15, 1888.)

852. Moyer, Dr. H. N.—On Acetanilid in Epilepsy. (*Arch. of Gyn.*, July 1888.)

853. Chéron, Dr.—Formula for Bronchitis.

854. Salgó, Dr. J.—On Hyoscin and Sulphonal. (*Deutsche med. Zeitung*, No. 52, 1888.)

855. Grimm, Dr. J.—Tribromphenol as an Antiseptic. (*Deutsche med. Zeitung*, No. 52, 1888.)

856. Ewald, Professor Dr. C. A.—On Condurango in the Treatment of Carcinoma of the Stomach. (*Der Fortschritt*, No. 14, July 20, 1888; *Die Krankheiten der Magens*, Berlin, 1888.)

857. Jennings, Oscar, Dujardin-Beaumetz, Germain-Sée, and Others.—On Intoxication by Antipyrin. (*Paris Medical.*)

858. Foy.—On Pulque in Medicine. (*Med. Press and Circular*, July 1888.)

859. Greene.—The Treatment of Migraine with Indian Hemp. (*Practitioner*, July 1888.)

860. Bruce.—The Comparative Value of Codeine and Morphine in the Treatment of Diabetes. (*Practitioner*, July 1888.)

861. Duke.—On Menthol in Pruritus Vulvæ. (*Brit. Med. Jour.*, July 1888.)

862. Dana.—On the Internal Use of Menthol. (*Therapeutic Gazette*, July 1888.)

863. Pitcairn.—On Hyoscine as a Hypnotic. (*Brit. Med. Jour.*, July 1888.)

Art. 848. *Shoemaker on the Imputations on Beta-Naphthol.*—The analogy of formation and similarity of constitution between naphthol and phenol, benzol, &c., led Dr. Shoemaker to experiment with β-naphthol as likely to afford a harmless and reliable antiseptic. He first secured a perfectly pure product, in white silvery scales. By employing different temperatures in the sulphonation of naphtholin, α-naphthol and β-naphthol are produced. The author has applied himself to the task of ascertaining which of the two naphthols has, if any, the more toxic qualities. He took half a grain of pure β-naphthol in 3,000 parts of water, but beyond producing some heartburn and dizziness, with a slight sensation in the lumbar region, no effect was produced, though the dose was repeated for several consecutive days, and increased to four grains. In practice he found that it fully sustained the claim of Kaposi as to its efficacy in scabies, psoriasis, and chromophytosis, as well as in certain forms of eczema, in which it not only allayed the attendant itching but lessened infiltration. He found it a most useful detergent and deodorant in treating wounds and indolent ulcers, in removing the fœtor, or establishing a healthy condition of the parts. In aqueous solutions of half a grain to the fluid ounce of water it was very useful in leucorrhœa and uterine carcinoma, as well as in gonorrhœa in the male and female. As none of his patients have experienced the toxic effects reported to have followed its use, he declines to consider it poisonous.

849. *Lackersteen on Glonoin in Collapse.*—Three cases were given in which patients apparently dead were resuscitated by means of injections of nitro-glycerin. The first case was that of a young lady who became suddenly collapsed during the passage of a gall-stone. Neither respiration nor pulse were perceptible. The hypodermic injection of ten minims of a 1-per-cent. solution of the drug was promptly followed by signs of returning life, and she ultimately made a good recovery. Case 2 was one of drowning, and case 3 was that of a still-born child. In each case atropine was injected as soon as the effects of the nitro-glycerin were apparent.

850. *Derlon on the Use of Antipyrin associated with Quinine.*—If antipyrin be added to the mixture in cases when it is desired to give large doses of quinine (15 grains and upwards), the uncomfortable effects to which the latter often gives rise are avoided. Dr. Derlon gives 3 grains of antipyrin to 5 of quinine. The antipyretic effect of the quinine is increased, and the symptoms of quinism do not occur. Moreover, the combination is better borne by the stomach, and it is believed that 'antipyrin modifies the reflex actions starting from the mucous lining of the stomach.'

851. *Dujardin-Beaumetz on Saccharin.*—In a report brought before the Academy of Medicine, drawn up by Dr. Dujardin-Beaumetz on behalf of the Commission specially appointed to consider the question of the employment of saccharin in the preparation of alimentary products, it is urged that the use of saccharin for such purposes should be forbidden, on the ground that it is in no sense a food, and that when taken continually in small doses it is likely to give rise to gastric troubles. Dr. Worms spoke in confirmation of the conclusions, and quoted the opinion of Dr. Pavy to the effect that a large proportion of diabetic subjects, who had resorted to saccharin as a sweetening agent, had soon experienced painful sensations in the stomach, with intestinal troubles.

852. *Moyer on Acetanilid in Epilepsy.*—In five cases the drug had been used, in two, for too short a time to give results. In the other three, it was used in one case for one month, another for three months, and in the last for five months. The first of these was one of *grand mal* in a six-year-old child; the attacks occurred several times weekly. The remedy was given in two-grain doses, and later increased to five grains, three daily, for one month. At the end of that time acetanilid was discontinued, as the attacks were not mitigated nor lessened in the least. The second case was that of a five-year-old idiot child, who had attacks of both *grand* and *petit mal* daily. The child was so restless and noisy as to make life a burden for the family, and these symptoms were always increased by the use of the bromides. Acetanilid was (irregularly) given in five-grain doses, three daily, for three months. The attacks were lessened in frequency (two weeks was the longest free interval) and in severity. The conduct of the child was improved, and he became less noisy and more manageable. The third case, a boy aged 12, was one of unusual interest, and first came

under observation eighteen months ago. The attacks were abortive *petit mal*, and occurred sometimes as often as ten to twenty times daily. If the patient were standing when the seizure came, the only phenomena noticeable were a closure of the eyelids, turning of the head to the left, an opening of the mouth, and a discharge of thin watery saliva. For an instant there was a slight swaying of the body and an evident momentary loss of consciousness. The bromide treatment was instituted with marked benefit. The boy, who had become very stupid by reason of the frequency of the attacks, was able to return to school and resume his studies. The attacks did not occur oftener than once in two months. Some five months ago the bromide began to affect his general health, and was discontinued. Acetanilid was given in its place, five-grain doses, thrice daily. It has been given regularly, and thus far has caused no untoward symptoms by reason of its prolonged administration. The patient has held his own, has had but two attacks since commencing the use of acetanilid, and is bright, active, and cheerful.

853. *Chéron's Formula for Bronchitis.*—℞ Terpine 5 grammes ; glycerine, rectified spirits of wine and syrup of honey, of each 70 grammes ; vanilline 2 centigrammes. Each tablespoonful of this mixture contains 50 centigrammes (10 grains) of terpine. The dose is two tablespoonfuls a day.

ALFRED S. GUBB.

854. *Salgó on Hyoscin and Sulphonal.*—Dr. J. Salgó has used hydrochlorate of hyoscin in a two per mille solution, injecting half of the contents of a Pravaz syringe under the skin. The first trials were made in cases of extraordinary excitement, without any regard to the exciting cause, with a view to reducing the symptom of exaltation. Later on, injections of hyoscin were given in cases of the vague restlessness of paralytic insane patients, where there was neither actual excitement nor crying. The drug was subsequently applied as a mode of discipline in the case of querulous or crafty insane patients. But in the last two classes of experiments the drug failed to have any effect. If one milligramme of hyoscin is injected during an attack of frenzy, pauses in the violence will be observed after the lapse of ten or fifteen minutes. The speaking and shouting becomes moderated, the movements come in a jerky manner, the voice grows hoarse, and the tongue heavy. Gradually the general state of tension disappears, words are gabbled, the movements are confined, the knees give way, and generally the patients look like drunken men. They fall down, or go on hands and knees, crouch in a corner with their heads down, and scarcely utter a sound. In this the full stage of the effect of hyoscin, which occurs at the latest about twenty minutes after the injection, the breathing is steady, the pulse stronger and fuller than before the injection, sensibility is not suspended, the reaction of the skin to irritation is slow, and in some cases the pupils are dilated. In this condition the patient remains from two to eight hours. The eyes appear tired and sleepy, but actual sleep rarely occurs. After the effect has passed away, the patient without any transition stage begins to rage and shout as if suddenly awaking from a deep sleep. No secondary or after effects have been observed. Salgó has never met with an instantaneous effect of hyoscin, though it must be mentioned that he never experimented on a case of alcoholic intoxication. In one patient an idiosyncrasy against the drug was observed after the first injection. The results of Salgó's experiments are that when it is important to quickly soothe a violent patient hyoscin is without a rival. Its effect is more rapid and more to be relied on than that of chloral, morphin, paraldehyde, not to mention other drugs. Even after three injections during twenty-four hours Salgó did not find any cumulative effect, so that evidently hyoscin takes a high place in the treatment of the insane. *Sulphonal* has so far been used by Salgó only as an opiate, nor have any disagreeable after or secondary effects been observed. It is pleasant to take, and in this respect compares favourably with chloral hydrate or paraldehyde. Its effect Salgó takes to be equal to that of paraldehyde—*i.e.* it is a good though not necessarily sure and reliable hypnotic.

855. *Grimm on Tribromphenol as an Antiseptic.*—Dr. F. Grimm has reported in the *Deutsche med. Wochensch.* on the antiseptic properties of tribromphenol, which is separated by the action of bromine on carbolic water solutions in the form of white soft crystals, which are fusible at 95° C. (*Deutsche med. Zeitung*). The drug does not in the least irritate the mucous membrane of the mouth, pharynx, or nose, nor has it any effect on the skin, not even near wounds. If powdered on to recent wounds it causes more or less violent burning, and the wound surfaces are slightly cauterised, and become superficially necrotised. Granulating wounds are severely irritated by it, so that even slight hæmorrhages occur, but without deeper disturbance, and it is surprising how quickly atonic, pale granulations are excited into action by the drug. On ulcerous and gangrenous processes tribromphenol acts energetically as a disinfectant. It is, therefore, recommended for impregnating (2 or 3 per cent.) bandages, for antiseptic salves, and preparations of bacilli, and the like. Trials with nutritive gelatine and staphylococcus pyogenes, meat-decoctions, urine, &c., showed that tribromphenol in a 1 per cent. ammoniacal solution destroyed the bacteria in putrefying liquids within half an hour. In gelatin the development of putrefactive bacilli was stopped with a 3 per mille solution. Gauze saturated with 2 per cent. or 3 per cent. tribromphenol, and then damped with blood-serum, meat-decoction, or urine, was, after a fortnight, still odourless, while a 1 per cent. gauze began to smell after five days, and unprepared gauze had a strong odour already within three days. JOHN ELLIOTT.

856. *Ewald on Condurango in the Treatment of Carcinoma of the Stomach.*—The treatment of cancer by condurango (the bark of Gonolobus Condurango, *Richard*, or Marsdenia Cundurango, *Brown*, an Asclepiadacea indigenous in Ecuador and Peru, especially in the Peruvian province of Loja), which at its first introduction by Friedreich in 1874 had been hailed with so much expectation, soon fell into oblivion. Lately, however, it was submitted to a methodical investigation, first by Immermann in a limited number of cases, and by Riess in a larger number of specific character, which have recently been published. Riess wishes to limit the use of this remedy entirely to the treatment of carcinoma of the stomach, and from his experiences in 80 cases treated with, and in 116 cases treated without condurango, pronounces for its specific action. 'The observation,' he maintains, 'of a greater series of cases produced the conviction that the life of many patients had been considerably prolonged by the condurango treatment. Orszewcky and Erichsen state that the use of condurango

bark stimulates the development of connective tissue, and at the same time the disintegration of the cellular elements of the cancer.' Professor Ewald does not deny the favourable effect of condurango on the general condition of patients suffering from carcinoma of the stomach. 'With good reason,' he says, 'and in consequence of the important observation of Riess, the condurango is at present extensively employed. It improves the concomitant gastric catarrh, and, having the same favourable effect in general muco-catarrhal diseases of the mucous membrane of the stomach, the condurango proves an excellent stomachic in all the cases in which there is a genuine catarrh of the mucous membrane—*i.e.* the secretion of a muco-serous, more or less purulent, fluid.

Ferd. Adalb. Junker, M.D.

857. *Jennings and Others on Intoxication Consecutive to Doses of Antipyrin.*—At a meeting of the *Académie de Médecine*, M. Ball read a paper by M. Oscar Jennings on a case of intoxication by antipyrin. The patient suffered from nodular rheumatism; 2·50 grammes of antipyrin were daily administered during a week. Erythematous spots on the arms were observed on the eighth day; the patient had an uncomfortable sensation in the eyes. On the following day the face was red, and the eyelids were swollen. The following day a rash appeared all over the body; catarrhal conjunctivitis, loss of appetite, and a sensation of internal cold were observed. The pulse was 78. There was singing in the ears. The patient was very weak. A few drops of tincture of belladonna caused these symptoms to disappear rapidly. M. Jennings considers that antipyrin should be administered with great circumspection to old people and persons of an impressionable temperament. The symptoms of intoxication can, however, be easily removed by administering a few drops of tincture of belladonna, or with subcutaneous injections of atropine. M. Germain Sée observed that he had met with many analogous cases. The symptoms of intoxication he had observed were usually due to doses of 3 to 4 grs. of antipyrin, administered during several days. Such symptoms are most commonly met with in female patients. Antipyrin should never be administered a second time to patients in whom these symptoms have been observed. In such cases acetanilid or antifebrin should be substituted for antipyrin. M. Sée strongly condemns the practice of administering belladonna, or injections of atropine, to combat the symptoms of intoxication, which will disappear twenty-four or twenty-eight hours after the doses of antipyrin are suspended, and which cannot be regarded as of a serious nature. M. Dujardin-Beaumetz, who shares this opinion, remarked that, after a prolonged use, antipyrin determined pain in the stomach, and dyspeptic symptoms. The adulteration of antipyrin with benzine or other substances is possibly the cause of these symptoms, which have been more frequently observed of late. M. Dujardin-Beaumetz further remarked that subcutaneous injections with antipyrin are painful. Acetanilid determines cyanosis in certain cases; the dose of 2 grs. per diem should never be exceeded. M. Germain-Sée has observed the gastric symptoms described by M. Dujardin-Beaumetz, and believes they are due to the manner in which the antipyrin is prepared. In order to prevent these symptoms M. Sée employs carbonate of soda or seltzer water. For subcutaneous injections he employs 1 gr., administered in four injections. Employed in this manner the injections are not painful. M. Ollivier stated that he did not share the belief held by so many authors concerning the efficiency of antipyrin. He has employed this substance in the treatment of chorea, and found that it modified the affection in certain cases, whilst in others it produced no effect. W. Vignal.

858. *Foy on Pulque in Medicine.*—In the *Med. Press and Circular*, July 1888, p. 33, Mr. Foy draws attention to an article by Dr. Parsons in the *Therapeutic Gazette*, June 1888, in which he states that in Pulque we have not only a preventive, but a curative agent for Bright's disease. This drug is obtained from the Agave Americana, N. O. Amaryllidaceæ, and has been cultivated from time immemorial in Mexico and Florida, where it is commonly known as the Maquey. The Spaniards introduced the plant into Europe, and it may now be found along the northern shores of the Mediterranean. From the fresh juice is prepared the beverage which Dr. Parsons found so useful in Bright's disease. Pulque is also known as Agave wine or Octli; it is the national drink of the Mexicans, and is described as being cool, agreeable, and refreshing, and becomes a great favourite with Europeans, when they overcome their repugnance to its bad smell. The Mexicans assert that it is useful in the treatment of anæmia, acts as a diuretic and anti-syphilitic, is a good stomachic, promotes digestion, and induces sleep. It is thus prepared:—After the juice has been collected, it is carried to the vats for fermentation. These vats consist of raw ox-hides loosely suspended in a strong wooden frame, with the hair on the outside. These hide-made vessels contain the cryptococcus or ferment which is a residuum of the former fermentations. After a few hours the process is fully established, and the pulque is drawn off, always leaving a residuum in the vessel for the next fermentation. The dose for cases of Bright's disease is from two to three tablespoonfuls.

859. *Greene on the Treatment of Migraine with Indian Hemp.*—In the *Practitioner*, July 1888, p. 35, Mr. Greene relates some cases of migraine treated with cannabis indica. One lady, aged 53 years, had suffered for twenty-five years from an attack of migraine almost once a week; as soon as the cannabis was commenced an improvement was noticed, and in a short time they only occurred once a month in a much less severe form. Another patient, aged 35, had suffered for years every two or three weeks from migraine, but after two months' treatment she seemed completely cured. It is necessary to persevere with this drug steadily for at least three months. The alcoholic extract is the best form to give it, and must be freshly prepared. One third of a grain in a pill every night, or every night and morning, is generally sufficient to begin with, and in severe cases the dose may be quickly raised to half or two-thirds of a grain. Given in this way it is rarely one meets with any unpleasant symptoms, even in patients habituated to its use more than one grain should not be given at a time. Unlike opium, no craving for further doses follows its medicinal use, and apparently it can be given up without the slightest effort at any time. (Many observers confirm Mr. Greene's statements, as a reference to sect. 1434 : 2 of *Medical Digest and Appendix* will show.)

860. *Bruce on the Comparative Value of Codeine and Morphine in the Treatment of Diabetes.*—In the *Practitioner*, July 1888, p. 1, Dr. Mitchell Bruce

contributes a paper in which he contrasts the relative value of codeine and morphine in the treatment of diabetes. The conclusions arrived at show that morphine is unquestionably more powerful than codeine; in two cases quoted it completely removed the sugar, but codeine did not; when the excretion was greatly reduced, morphine obviously controlled it more completely than codeine, under which occasional increases of the sugar occurred. The amount of morphine required to produce the maximum amount of benefit was but one-fourth that of codeine. The best effect was obtained from about 6 grains of acetate of morphine *per diem*; from phosphate of codeine not until about 30 grains (=21 grains of codeine) were given *per diem*. As regards expense, morphine is only about one-third the price of codeine. The author does not agree with Dr. Pavy in regarding codeine superior to opium or morphine, but suggests that morphine be given as long as the sugar continues to fall; when only a trace remains, one must be satisfied, in ordinary cases, and it should not be pushed in order to get rid entirely of the sugar. In making a trial of these drugs it is necessary to insist on the patient strictly adhering to diet, as no proper trial can be made with ordinary diet. The drug should be given by the mouth every three or four hours, and the following diet should be allowed before beginning the medicine, and as long as the sugar continues to fall:—Meat, 6 oz.; gluten bread, 10 to 14 oz.; eggs; milk, 2 to 3 pints; tea, or Van Abbott's cocoa, 2 pints; water and ice, about 3 pints.

861. *Duke on Menthol in Pruritus Vulvæ.*—In the *Brit. Med. Jour.*, July 1888, p. 75, Dr. Alex. Duke states that he has found the application of solid menthol very effective in giving relief in cases of pruritus vulvæ. The menthol should be well rubbed over the mucous surface, avoiding all cracks or tender spots. A sense of burning is at first complained of, but is very soon followed by what some patients describe as a 'delicious coolness,' which lasts a considerable time. A similar relief might be obtained by the use of menthol in pruritus ani. Dr. Duke finds this plan far more beneficial than the application of peppermint water, recommended by Dr. Routh in his paper on the Treatment of Pruritus Vulvæ. The sedative effect of the menthol may be due to the fact that the ordinary menthol cones (sold for neuralgia) were used, and these are prepared with a mixture of camphor and menthol.—[A saturated solution of boric acid seldom fails to relieve at once.—*Rep.*]

862. *Dana on the Internal Use of Menthol.*—In the *Therapeutic Gazette*, July 1888, p. 441, Dr. Dana records his experience in the use of menthol internally. In doses of 5 to 20 grains it causes a sensation of warmth, lasting an hour or more. It strengthens but does not much quicken the heart-beat, and raises arterial tension. It is eliminated in a modified part by the kidneys, and probably in part by the lungs. It rarely or never causes nausea or gastric irritation, even in doses of 1 to 1½ drachms daily. In doses of 5 to 20 grains it is also a nerve anodyne, and is very useful in cases of migraine, supra-orbital migraine, and of neurasthenic, gastric, and anæmic headaches. It is helpful in some sciaticas. It is of no use in acute rheumatism, though it seems to have some antipyretic power. It has been found useful in diphtheria and bronchial affections. It is best given in the form of a 25-per-cent. alcoholic solution, doses 10 to 30 minims in a wineglass of hot water. It is useful when combined with antipyrin or antifebrin, and has been prepared in compressed tablets in this form by Mr. David Hays of New York.

863. *Pitcairn on Hyoscine as a Hypnotic.*—In the *Brit. Med. Jour.*, July 1888, p. 75, Mr. Pitcairn gives some instances of the action of hyoscine in delirium tremens, insomnia, and mania. As a hypnotic this drug is most certain, and it is only contra-indicated in pulmonary disease, whilst causing no digestive disturbance, being in this respect far superior to morphine. It does not appear to have any special idiosyncrasy, but toleration renders a previous effectual dose inert on repetition. It is best to commence with a dose of 1-150 gr., increasing up to 1-70 gr. Larger doses are very apt to produce alarming symptoms, and should these occur pilocarpin or caffein, in the form of the sodio-salicylate, must be given at once. In using the drug hypodermically the tabloids prepared by Messrs. Burroughs & Wellcome are very handy.

Richard Neale, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

864. Coles, Dr.—On a Case of Paralysis cured by Pregnancy. (*Obstet. Gazette*, July 1888.)

865. Petit, Dr. Paul.—On Ovaritis and Cysts of the Ovary. (*Nouv. Arch. d'Obstét. et de Gyn.*, July 25, 1888.)

866. Gardner, Dr. Wm.—On a Case of Ovarian Cyst in a Pregnant Woman. (*Arch. of Gyn.*, July 1888.)

867. Jeannel, Dr.—On the Influence of Traumatism on Pregnancy. (*Annales de Gyn.*, July 1888.)

868. Byford, Dr. H. T.—On a Case of Removal of the Uterus per Vaginam for Fibroids. (*Jour. of the American Medical Association*, July 14, 1888.)

869. Gregory, Dr.—On a Case of Rupture of the Vena Cava following Ovariotomy. (*Obstet. Gazette*, July 1888.)

870. Garde, H. C.—A Case of Porro's Operation for Rachitis of the Pelvis. (*Australasian Med. Gazette*, March 15, 1888.)

871. Dührssen, A.—Case of Spontaneous Rupture of the Vagina with Partial Escape of the Child into the Peritoneal Cavity: Recovery. (*Berliner klin. Wochensch.*, 1888, No. 1; *Centralbl. für Gynäk*, 1888, No. 25.)

872. Löhlein, Dr.—Cancer of the Body of the Uterus complicated with Interstitial Fibromyoma. (*Centralbl. für Gynäk.*, No. 30.)

873. Billings, Dr. John S.—Ovariotomy in Age. (*Boston Medical and Surgical Journal*, June 21, 1888.)

874. Rutherford.—On the Treatment of Hæmorrhage in Fibromyomata. (*Brit. Med. Jour.*, July 1888.)

875. Westermark, F.—The Extirpation of the Fallopian Tube, and the Indications thereto. (*Nordiskt mediciniskt Arkiv*, Band xix., No. 23.)

Art. 864.—*Coles on a Case of Paralysis cured by Pregnancy.*—The patient was a lady about 28 years of age, with three children, the eldest being 6 years old. When her eldest child was 11 months old her left foot commenced to drag when she walked, and it was not very long before paralysis was almost complete in both lower extremities. There was partial paralysis of the bladder and rectum, and partial paralysis of the vagina—so much so that the fist could be put into the vagina without any difficulty, it being perfectly relaxed. This lady went to various physicians, and to one or two neurologists,

who used the battery on her. She went to hot springs. Finally, she became pregnant again, and almost from the day she became pregnant she felt a great deal better. She felt that she was regaining the use of her limbs. As soon as the uterus rose out of the pelvis she could walk perfectly well and enjoyed excellent health. After the birth of the second child she again lost the use of her limbs, and in this instance she suffered violent aching pains in the calves of the legs and pains occasionally shooting up to each hip, something like sciatica. She then became pregnant a third time, and almost directly she became so she felt better again. As soon as she missed her menstrual period she felt better. She regained the use of her limbs. This time she had a miscarriage about the fourth or fifth month, and had a good deal of trouble; she had some pelvic cellulitis following this accident, which confined her to bed for some time. She got over it, however, and she suffered more or less weakness and pain in the lower limbs. She then became pregnant a fourth time, and the same improvement took place. She miscarried again, and the physician who had charge of the case, and who had been the family physician for the last four years, told her that as she was so much better during pregnancy, the best thing she could do was to get in that condition again, and in a few months she again became pregnant. That child was carried to term. She had two miscarriages and carried three children to term in the last six years. During her pregnancy, and for eleven months subsequently, she regained the use of her limbs, and she had perfect use of them until within the past six weeks, since which the paresis had returned; she felt weak in both limbs, but especially in the left, which she could not raise from the floor. She seemed to be in perfect health otherwise. On making an examination nothing wrong was found about the uterus except some laceration and subinvolution.

865. *Petit on Ovaritis and Cysts of the Ovary.*—The author's conclusions are as follows:—1. That to the two principal forms of ovaritis—suppurative and sclerotic—are related certain cystic formations, the most important of which are encysted abscesses, the so-called follicular cysts (serous, caseous, sanguineous), and they require to be carefully distinguished from neoplasms of the ovaries. 2. It is admitted that abscesses are frequently connected with the puerperal condition, and it is probable that they commence in the follicles. He insists upon the fact that they may remain chronic for long periods of time, constituting latent sources of infection. As regards the follicular cysts properly so-called (follicular dropsy of Rokitansky), they would appear to be primarily due, in the majority of cases, to morbid and repeated congestion of the ovaries, and rather to give rise to the interstitial inflammation than to be the result thereof. Hypergenesis of the cubical epithelium in successive attacks, too indolent to lead to its being shed, sclerosis of the follicle walls, degeneration of the epithelium, liquefaction of the products of retention by exudations, hæmorrhages—these are the phenomena which succeed each other, and permit only a restricted development of the cysts. They may, nevertheless, exceed the size of the clenched fist. 3. In presence of an ovarian cyst of moderate size, without any general or local symptoms pointing to a malignant growth, and before treatment by hot-water injections, curettage, &c., has been methodically tried, it is desirable, before having recourse to castration, to keep the patient under observation for two or three months.

866. *Gardner on a Case of Ovarian Cyst in a Pregnant Woman.*—The case was one of ovariotomy for dermoid cyst, with twisted pedicle and most alarming symptoms of peritonitis. At the operation last winter there was found universal adhesion of the cyst; it was necessary to remove the second ovary for commencing disease. Washing out the cavity was freely practised, and a drainage-tube was used for five days. It lay against the posterior wall of the uterus for five days. The uterus was somewhat large and vascular, but pregnancy was not seriously thought of, yet in a few weeks the woman was found to be undoubtedly pregnant. He now had to report that a few weeks ago she had been confined at full term of a large, healthy, living child, and had made an easy and rapid recovery. This was the second ovariotomy Dr. Gardner had done during pregnancy. The first case was also confined at full term, both mother and child being alive and well. Considering the dangers of pregnancy with ovarian tumour when uninterfered with, such cases surely furnish a strong argument in favour of prompt performance of ovariotomy even when at the time of diagnosis there are no alarming symptoms. Both of his cases were, however, done for urgent symptoms.

867. *Jeannel on the Influence of Traumatism on Pregnancy.*—A woman, 20 years of age, at the fifth month of pregnancy, was the victim of a serious accident, complicated with severe crushing, necessitating the immediate disarticulation of the forearm. The night following she suffered from pain in the back and abdomen, calmed by opiated injections. Subsequently an abscess formed over the olecranon, resulting in febrile reaction (38° C.) and requiring to be opened. Later on an erythematous eruption of the arm caused another attack of fever. Notwithstanding these complications the woman made a good recovery without any interference with pregnancy. The author sees in this case a confirmation of Verneuil's axiom that the abortive effect is not due directly to the traumatism, but to the consecutive traumatic fever. To convince himself of the accuracy of his views, he injected into the veins of a pregnant bitch some putrid liquid. A feverish condition resulted, and the animal gave birth to twelve stillborn pups. The danger of abortion is greatest during the first few days following the injury, but other observations would seem to prove that primary traumatic fever does not as a rule tend to abortion.

868. *Byford on a Case of Removal of the Uterus per Vaginam for Fibroids.*—The uterus was about double the normal size. The fibroids had produced incurable stenosis, and were accompanied by almost constant pain of increasing severity. The patient was 42 years of age, and she had had four children, the youngest 20 years old. She was obliged to wash for a living; had been getting worse for two years, and during the past year had had to stop work every two or three days on account of suffering referred to the pelvis. She had been under treatment by prominent gynæcologists, both for the stenosis and for the fibroid tumours, without avail. As nothing short of a severe surgical operation would have relieved the stenosis, it was thought that vaginal hysterectomy would be but little less dangerous, and would give permanent and complete relief instead of temporary and partial. It would remove the tumours with but

little danger, and thus forestall a possible abdominal hysterectomy or supravaginal amputation, with the terrors so often connected with them. The whole uterus was enlarged and hardened, and the cervix would form a bad stump in case of such amputation. Two of the tumours were near the serous surface, and one just under the mucous membrane. The stenosis extended half an inch above and a little below the internal os, and was of cicatricial hardness. The tumours were each about the size of a filbert, The patient did not have a bad symptom after the operation. The ovaries were not removed, as they were not diseased, and were undergoing senile atrophy.

869. *Gregory on a Case of Rupture of the Vena Cava following Ovariotomy.*—The operation was undertaken for the purpose of removing an immense cyst. The cyst was thick, and there were adhesions in every direction, in detaching which the sac was ruptured. The woman was turned over on her side to allow the water to run away and the operator then enlarged the opening, put his hand in and drew the cyst out from behind, inverting it. After a great deal of trouble it was got out. They tied the pedicle, and were mopping out the cavity when an oozing was discovered opposite the lower lumbar vertebræ, just about the spot where the vena cava begins. There seemed to be a bulging of the peritoneum at that point, and there was a mass the size of the thumb which was seized and ligatured. The woman died three days later. No *post mortem* was allowed, but no doubt was entertained as to the existence of a rupture. ALFRED S. GUBB.

870. *Garde on a Successful Case of Porro's Operation in Queensland.*—Mr. H. C. Garde, F.R.C.S.Ed., Surgeon to the Maryborough Hospital, Queensland, describes the following case which occurred in his hospital practice. The patient, aged 23, was brought under his notice when within a month of her full time of pregnancy. Owing to her dwarfish appearance, coupled with a statement that the father's branch of the family suffered from rickets, Mr. Garde made a careful examination, and found that the antero-posterior diameter of the pelvis was only 1½ inch. Her paternal aunt had had craniotomy performed six times, and died in the last confinement. Porro's operation was considered preferable to craniotomy in this case. On the morning of Jan. 8, 1888, after a very light breakfast, early in the morning, the patient had an enema of warm water, chloroform was administered to her in bed, she was then carried into the next room, and at half-past ten was placed upon the operation table. Mr. Garde made an incision of about 5 inches, extending from the umbilicus to the pubes. There was little or no hæmorrhage, so that he was able to dispense with the pressure-forceps. On opening the peritoneum to the full extent of the external wound, carbolised sponges were carefully packed around the edges, then an incision a little over an inch was made through the uterine wall, when Mr. Garde introduced both his forefingers and tore it boldly open to the extent of 5 or 6 inches, as recommended by Mr Thornton. He next slit up the membranes, and extracted the child without difficulty. The neck of the uterus was at once grasped, and the loop of a Braxton Hicks' wire-écraseur passed around it, including both the tubes and ovaries. No Koeberlé's *serre-noeud* was available, for that reason the écraseur was employed. The loop was then drawn tight, and the whole mass cut off, the placenta remaining in its place; but little bleeding took place. The needles of an aspirator were used as a substitute for the special pins which were not at hand to fix the stump. Four deep silk sutures were next passed, and after the peritoneum was carefully sutured to the base of the stump, they were drawn together and a few superficial stitches inserted. Iodoform was liberally dusted over the surface of the stump and wound, and a pad of absorbent cotton placed over it. Broad strips of isinglass-plaster, with a light flannel bandage, were used to support the abdominal walls. Six hours afterwards, some oozing took place from the stump, for which a stout silk ligature was applied, and the surface touched lightly with the thermo-cautery. In four hours, bleeding again took place, when an elastic ligature (small drainage-tube) was passed twice around the stump, superficial to the pins, and securely tied. No further trouble was experienced. Nothing but ice was allowed for the first thirty hours, as the patient had considerable retching, followed by iced soda-water and milk, beef-tea, &c. The catheter was used every five hours until the third day, when she passed urine naturally. The temperature only once went up to 101°·6, and that was on Jan. 21, two days before the stump separated. Some of the sutures were removed on the fifth day, and the remainder on the seventh, when the wound was for the greater part healed. The child, a male, was brought up on cow's milk. A Porro's operation was performed successfully by the late Dr. G. Fortescue, in the Prince Alfred Hospital, and it was reported in the May number of the *Australasian Medical Gazette*, in 1884. Mr. Garde's appears to be the second case of this operation in Australia. One case, which occurred in that country was reported as 'a Porro,' but it was simply a supravaginal hysterectomy for fibroid disease of a non-pregnant uterus.

871. *Dührssen on a Case of Rupture of the Vagina During Labour.*—The patient was thirty-four years old and had borne four children, in two twin-labours said to have been uncomplicated. On this occasion the foot presented, and immediately above the feet could be felt the head, easily movable at first, but firmly fixed in the pelvic inlet after the rupture of the membranes. An hour after the rupture, the pains suddenly ceased; collapse and severe abdominal pains set in. On palpation the abdomen was found to be distended by the child's body as high as the umbilicus. To the right side of this distension, which was globular, lay an elongated hemispherical body, the uterus strongly contracted. Soft masses could be felt to the left, between the child's body and the abdominal wall. The child was easily delivered by the feet. The placenta and much blood followed. The hand introduced into the vagina distinguished the os externum surrounded by the cervix, also the uterus entire and well contracted, but a large rent, leading into a kind of cavity was found in the left lateral fornix of the vagina. The cavity and the vagina were packed with iodoform gauze. The patient had several feverish attacks without distinct signs of peritonitis; she was able to get up within a month. The cause of the accident seems to have been contracted pelvis of the flat, ricketty type; there had been no clumsy or violent obstetrical manipulations. The narrow pelvis and the abnormal position of the fœtus, the feet prolapsed below the head, prevented the passage of the child through the narrow pelvic inlet. Instead, however, of violent distension of the lower

segment of the uterus, usual under the circumstances, there was great strain on the insertion of the vagina, which at length gave way on the left side, where the head pressed, the rent extending into the broad ligament. This event might have been prevented had the membranes been ruptured earlier, when the head was still movable, and the feet drawn down. Threatening rupture of the vagina does not give rise to such distinct symptoms as are observed, at least by careful and experienced obstetricians, when there is danger of rupture of the uterus.

872. *Löhlein on Vaginal Extirpation for Cancer of the Body of the Uterus complicated with Interstitial Fibromyoma.*—At a meeting of the Berlin Obstetrical and Gynæcological Society, held on June 22, 1888, Dr. Löhlein exhibited a cancerous fibroid uterus, removed by vaginal extirpation. The patient was 58 years old, and had been in good health throughout thirty-eight years of married life, but she had borne no children. Eight years after the menopause she had been subject to purulent and sanious discharges, which had lasted for about six months. Severe attacks of pain occurred daily with great regularity, beginning at ten in the morning, reaching their height at mid-day, and ceasing about four in the afternoon. Sir James Simpson has already noted these rhythmical recurrent pains in cancer of the body of the uterus ['in some cases it (pain) comes on at stated hours,' Dr. J. Williams *On Cancer of the Uterus*, p. 106. See *Ibid.*, Case xxxi., p. 91.—*Rep.*] Dr. Löhlein traced its cause in this and in another case occurring in a nullipara to great elongation and simultaneous narrowing of the cervical canal. The endometrium could not be easily scraped as the os externum was very narrow. There was some delay in treating the case. The operation proved very difficult, owing to the corpulency of the patient, and the rigidity of the tissues around the vault of the vagina. Dr. Löhlein believed that in such a case supravaginal amputation would have been at least easier. The disease had reached the mucous membrane of the os internum. Six days after the operation, when the specimen was shown, the patient was doing well. An interstitial fibroid growth lay to the right, close under the serous coat and free from degenerative changes. Dr. Löhlein had observed fibroid disease twice in seven cases of cancer of the body of the uterus.

873. *Billings on Ovariotomy in Age.*—In the London Medical Recorder for June 1888, Art. 584, a report was published of Dr. Homans' 'Case of Ovariotomy in a Patient Eighty-two Years Old.' That no trustworthy record exists of so old a patient being subjected to the operation in question there appears to be no doubt. Dr. Billings has shown that previous text-book records of ovariotomy in age are mostly inaccurate. Dr. Miner's alleged case, where the patient was said to be eighty-two, has been widely quoted from the *American Journal of the Medical Sciences*, vol. liii., 1867, p. 284, where, unfortunately '82' was substituted for '32.' The reporter was misled, owing to the difficulty of obtaining the *Buffalo Medical and Surgical Journal*, September 1866, where the correct age '32' was given. Atlee's case, aged 68, has been reported as '78.' Schröder (*Handbuch der Krankheiten der Weiblichen Geschlechtsorgane*, 7th edition 1886) states in a footnote that he has successfully operated on patients of seventy-nine and eighty. Dr. Homans' case is reported in the *Boston Medical and Surgical Journal*, May 3, 1888.

Alban Doran.

874. *Rutherford on the Treatment of Hæmorrhage in Fibromyomata by Hydrastis Canadensis.*—In the *Brit. Med. Jour.*, July 1888, p. 123, Dr. Rutherford publishes five cases of uterine fibroids successfully treated with hydrastis. The two most reliable preparations of this drug are the tincture, in doses of fifteen to sixty minims, and the fluid extract, in doses of fifteen minims to half an ounce. It seems to act in small or medicinal doses as a vaso-constrictor, while in large, or toxic, doses it is a dilator. Fellner and Woltering noticed that in rabbits this drug produced uterine contractions, which were unaccompanied with cramps. The author states that he finds hydrastis decidedly controls the hæmorrhage in cases of fibroid, but does not diminish the size of the tumour. The administration of ergot causes in some patients an obstinate constipation, and frequently brings about derangements of the digestive tract. Hydrastis, on the contrary, can be taken continuously for a considerable time without any ill effects, and will be found to improve digestion, and act as a stomachic tonic. A further trial of this drug in similar cases is certainly desirable, as in other countries it is used freely with the best results.

Richard Neale, M.D.

875. *Westermark on the Extirpation of the Fallopian Tube.*—The author has performed this operation ten times. A short sketch of its history is given, and attention is arrested particularly on Mr. Lawson Tait, as chiefly representing this operation in England, though the name of Spencer Wells comes first in connection with it historically. All his operations from the first are carefully examined by the author for their indications, as far as published, and it is concluded that Mr. Tait does not form a complete diagnosis, but makes an exploratory laparotomy, when he finds that the patient's condition demands it. This led to the complete operation in all but 3 per cent. of the cases. Owing to Mr. L. Tait's extraordinary success, this operation has been adopted not only in England, but also in Germany and the United States. In Sweden the author published the first cases, and now presents a series of ten cases. The chief indication is tubal pregnancy, which requires extirpation before the period of rupture. Veit has operated eight times for this indication, and Gottschalk twice, all successfully. But the chance is seldom afforded, for women do not usually obtain aid until serious symptoms arise — *i.e.* when rupture has already happened. Even then the operation should be performed unless the patient is already *in extremis*. All methods of arresting the growth of the ovum are uncertain, and in general more dangerous than extirpation. One case was operated on after rupture, and with success, by the author, who finds accounts of thirty such cases with operations; of these only two ended fatally. Next comes salpingitis (pyo- and hydro-), fully discussed. Amongst the symptoms, attention is drawn to continual pain in the true pelvis, becoming more severe a little before each menstruation, and sometimes amounting to insupportable agony. Contrary to many authors, Westermark ascribes these violent pains to strong contractions of the walls of the Fallopian tubes, due to menstrual turgescence. On the other hand, the continual pain is referred to perimetritis, which is almost always present. The

author does not regard this perimetritis as an indication for operation. On the contrary, he seeks to suppress it before operating. The diagnosis is not difficult in simple cases, but complications are often present (ovarian abscess, ovarian or parovarian cysts). When diagnosis is difficult owing to extensive perimetritic exudation, a long course of absorptive treatment is recommended. Diagnosis is rendered easier, and a few cases heal without operation. As to the different forms of salpingitis, all the chronic and some of the acute forms ought to be operated on. Amongst the acute, the gonorrhœal takes the first place. In one case the author operated within a month from the beginning of the disease, and was able for the first time to trace in the 'preparation' distinct groups of gonococci. In the catarrhal form premature operation is warned against. Prognosis is favourable. The author had one death out of nine cases of operation for salpingitis; here tuberculosis was present locally, with secondary tubercular peritonitis. Out of 498 extirpations by eight operators the author finds 41 deaths, the mortality thus being 8 per cent. Cases of operations for neoplasms are cited, and the author passes on to describe the operation of extirpation, which is on the usual lines.

E. J. Edwardes, M.D.

SYPHILOGRAPHY.

RECENT PAPERS.

876. D'Ornellas.—Gangrene of the Fingers from Syphilitic Arteritis. (*Annales de Derm. et de Syph.*, No. 1, 1888.)

877. Bloxam, J. A.—On Syphilis and its Treatment. (*Lancet*, May 5, 1888.)

878. Haab.—On General Gonorrhœal Infection. (*Brit. Med. Jour.*, June 2, 1888.)

879. Szadek.—The Surgical Treatment of Suppurating Venereal Buboes. (*Viertelj. für Derm. und Syph.*, Heft 2, 1888.)

880. Ingria.—Non-infecting Ulcers of the Vagina. (*Gazz. degli Ospitali*, and *Viertelj. für Derm. und Syph.*, Heft 2, 1888.)

881. Dietrich.—The Palpation of the Lymphatic Glands. (*Viertelj. für Derm. und Syph.*, Heft 2, 1888.)

882. Fraenkel, E.—On Syphilis of the Trachea and Thyroid Gland. (*Deutsche med. Wochensch.*, and *Viertelj. für Derm. und Syph.*, Heft 2, 1888.)

883. Sokolowski. — Syphilitic Narrowing of the Trachea and Bronchi. (*Gazeta Lekarska*, and *Viertelj. für Derm. und Syph.*, Heft. 2, 1888.)

884. Kraus, Ed. — Statistical Contribution to the Pathology of Inherited Syphilis. (*Arch. für Kinderheilkunde*, and *Viertelj. für Derm. und Syph.*, Heft 2, 1888.)

885. Hayem and Parmentier, Drs.—On the Spinal Manifestations of Gonorrhœa. (*Rev. de Méd.*, June 10, 1888.)

886. Gilbert-Dhercourt, Dr.—On the Salts of Thalline in the Treatment of Gonorrhœa. (*Rev. Gén. de Clinique et de Thérap.*, July 19, 1888.)

Art. 876. *D'Ornellas on a Case of Gangrene of the Fingers from Syphilitic Arteritis.*—A valet, aged 45, the father of three healthy children, at the beginning of February 1887 first noticed coldness of the distal portions of the four fingers of the left hand. Things remained in much the same state for about six weeks, the ends of the fingers being greyish-white in colour; but at the end of March a blackish-brown spot appeared on the ulnar side of the middle finger near the nail, and very soon spread over the whole of the end of the finger. A fissure then formed at the middle of the patch, and with a probe bare bone could be felt at the bottom of it. The man's previous history was that twenty-three years before he had suffered from sciatica, which lasted two months in spite of treatment, and that since then he had had frequent attacks of asthma, usually as a consequence of cold. Twenty years ago he had had a chancre on the prepuce, which healed without treatment in two or three weeks. There was no history of constitutional syphilis. The patient was seen on April 14 by the author and M. Ducamp. The soft parts at the end of the finger were then in a state of mortification and were removed with forceps, leaving part of the ungual phalanx exposed. There was no redness nor pain, nor anæsthesia of the surrounding parts, but hard cords could be felt corresponding to the arteries of the fingers, and pulsation in the radial was weak. The urine contained neither sugar nor albumen, and no lesion of any of the viscera or of the great blood-vessels could be made out. Opium and Vichy water were prescribed internally, and carbolic lotion as a local application. On April 18 the patient came complaining that the finger was worse, and there had also appeared on the ring finger of the same hand a black spot on the radial side near the nail. The pain in the two fingers now prevented rest at night, and eating had also become difficult because of soreness of the tongue. On examination, the tongue was found to be mammillated and fissured, a state which the author and Dr. Ducamp both diagnosed as due to tertiary syphilis. No other sign of syphilis could be discovered. Iodide of potassium was now prescribed, beginning with a daily dose of 2 grammes. Three days afterwards the other two fingers were attacked, a brown spot having appeared near the nail on the radial side of the little finger and on the ulnar side of the index finger. The dose of iodide was increased, and on the seventh day a line of demarcation had formed round the spots on the middle and ring fingers, and the sloughs gradually came away, leaving healthy granulations. The daily dose of iodide was now increased to 7, and afterwards to 8 grammes. A week later the spots disappeared from the index and little fingers. The man returned to work at the end of May, and continued under treatment till June 25, when the fingers as well as the tongue were healed, except that the end of the ungual phalanx of the middle finger remained bare. The patient then left off treatment, and on Aug. 15 noticed that the fingers, as well as the forearm and lower third of the arm, were sensitive and cold, and there was also difficulty and want of power in extending the limb, efforts in that direction producing also painful dragging sensations in the fingers. At the end of six days the ends of the middle and ring fingers were black and mummified. Treatment by iodide was resumed on Aug. 27. When the author saw the patient, on Sept. 7, he ordered large doses of iodide and mercurial inunction. There was then no pulsation to be felt in the left radial artery, palmar arch, ulnar artery, and lower third of the brachial artery, and all these vessels felt like hard cords. The arteries of the right limb appeared to be healthy; the heart-sounds were normal, and the urine contained neither sugar

nor albumen. Under continued treatment by iodide and mercury the dead portions of the fingers came away, and after resection cicatrisation eventually took place. On Nov. 10 the patient was well, and resumed work. At the end of the year the man continued well, treatment being still kept up. The left hand and forearm remained weak, and the muscles were atrophied. The arterial obliteration had not extended, but remained as before. The author remarks that it was not without hesitation that he arrived at the diagnosis of syphilitic arteritis in this case, never having heard of that affection being localised in the vessels of the extremities. The patient was shown to MM. Verneuil, Fournier, Duplay, and others, who all agreed in the diagnosis of syphilis, though none of them had ever seen a similar case.

877. *Bloxam on the Treatment of Syphilis.*—Mr. Bloxam recommends the subcutaneous injection of a solution of sal alembroth (double chloride of mercury and ammonium). It is made by dissolving 32 grains of mercuric chloride and 16 grains of pure chloride of ammonium in distilled water sufficient to yield 2 fluid ounces of product. Ten minims of this solution is equal to one-third of a grain of mercuric chloride. It is an absolutely permanent solution, not liable to fungoid growth or other decomposition, and without precipitation. The author states that he has given over 600 injections, using ten minims for a dose, without any untoward symptoms having been observed. The pain was comparatively slight, the slightest induration following, and the effect most satisfactory, as, after two injections, the physiological action of the drug was produced, and could be maintained by an injection once a week, whilst the symptoms of the disease, both local and constitutional, underwent most rapid and favourable change.

878. *Haab on General Gonorrhœal Infection.*—At a meeting of the Society of Physicians in Zurich, Professor Haab read a paper on generalised or constitutional gonorrhœal infection developing consecutively to specific urethritis. He often saw cases of gonorrhœal iritis and irido-cyclitis, as well as of conjunctivitis originating without any direct transmission of the urethral discharge. In the cases of the latter kind no gonococci were present in the conjunctival secretion, the disease generally running a mild course. The author also cites a case of general infection in a man who, after gonorrhœa, was suffering from extreme exhaustion, caused by continuous uncontrollable fever of many weeks' duration. The patient was suffering from effusion into his knee and elbow-joints, abscesses in the left axilla, prolonged obstinate cystitis, and double ophthalmia, ending in complete destruction of one eye and serious disorganisation of the other. No microbes were found in the articular exudation, but the axillary abscess contained staphylococci. Professor Haab seemed to think the case one of a mixed general infection, with gonococcus *plus* staphylococcus.

879. *Szadek on the Surgical Treatment of Suppurating Venereal Buboes.*—In this paper are given the results of the treatment of suppurating buboes by Drs. Fleischer and Szadek in the department for venereal diseases at the Military Hospital of Kiew, according to the method introduced by Dr. Fleischer in 1880. The number of cases of bubo dealt with was 274, which occurred among 1,084 cases of soft chancre treated in the five years 1882–86. As regards the development of bubo, which from the above figures is seen to have occurred in about one out of every four cases, the author remarks that it is not the extent of the chancre but its seat and its virulence which determine the occurrence of glandular inflammation. It often happened that the bubo formed only when the sore was healing, and sometimes even after its cicatrisation. Sores of the frænum and on the inner surface of the prepuce were most frequently complicated with bubo, and the majority suppurated in spite of prophylactic treatment. In almost all these abscesses several glands were involved and quickly became connected by sinuses with the original opening. Very rarely was the suppuration limited to a single gland. As regards the seat of the bubo, the right groin was affected in 105 cases, the left in 131, and in 38 both groins suffered. The cases of double bubo were mostly those in which the chancre was on the frænum, but, with this exception, the seat of the sore seemed to have no influence on the seat of the bubo. It was noticed that the chancre healed quickly after the development of adenitis. The bubo in most cases appeared three or four weeks after the chancre, but in some instances not until a fortnight after the sore had healed. The period which elapsed from the beginning to the opening of the bubo in healthy persons was usually from two to three weeks; only in anæmic and scrofulous and tuberculous patients was it as long as from four to eight weeks. The plan of treatment was as follows:—In the earlier stage, as long as there was no fluctuation or redness of the skin, the only measures adopted were rest and the avoidance of all irritation of the inguinal region, together with antiseptic treatment of the chancre. When the skin was red but fluctuation not present over the whole swelling, hot compresses steeped in carbolic lotion were applied until complete and uniform suppuration took place. Attempts at causing absorption of the bubo, by painting with tincture of iodine, for example, were made in many cases, but they always failed; the only result being at most some relief to pain and a longer course of the abscess. As soon as fluctuation was complete a long incision was made after removing the hair and thoroughly cleaning the skin with soap, followed by the application of a 5 per cent. solution of carbolic acid, or a 1 per cent. solution of corrosive sublimate. The incision, which must correspond with the length of the bubo, was usually made parallel with Poupart's ligament. After evacuation of the pus any sinuses that were found were laid open with scissors, and all swollen glands removed with the fingers or sharp spoon, after incision of the capsule of the gland when necessary. Finally any portions of skin that were destroyed were removed with scissors. The abscess cavity was next washed out with a solution of corrosive sublimate, powdered with iodoform alone or mixed with alum, and filled with iodoform gauze. Over this a dressing composed of layers of gauze or wool impregnated with sublimate and salicylic wool was applied, and then a ball of jute or tow, the whole being covered with a piece of macintosh or varnished paper, and secured with a spica bandage. The first dressing was usually left from two to five days, and then the wound was simply dressed with iodoform, this second dressing being disturbed only when oozing at the edges showed it to be necessary. The wound healed after from two to five dressings, and the whole duration of treatment occupied an average of thirty days. Burrowing and the formation of

sinuses never occurred, nor did the bubo become chancrous in any case. Erysipelas occurred five times, and acute eczema in the neighbourhood of the wound twelve times. Besides the cases of chancrous bubo, twenty-six suppurating syphilitic buboes were opened, and these usually healed without scraping or removal of glands. Twelve cases of tuberculous adenitis of the groin were treated by removal of the glands and scraping and the application of iodoform. No case of iodoform-poisoning occurred. The author includes in his paper the particulars of twenty of his cases, as well as a long account of the various methods of treating bubo, and a copious bibliography of the subject from the time of Astruc.

880. *Ingria on Non-infecting Ulcers of the Vagina.*—The author states, on the strength of numerous clinical observations, that contrary to the assertions of Rollet, Fournier, Profeta, and Gamberini, venereal sores are not very rare on the mucous membrane of the vagina, the proportion being about 14 per cent. The sores are most frequently seen on the posterior vaginal wall in its lower third ; in the upper third the *cul de sac* is the usual seat, while the middle third is most rarely attacked. The author states that the results of his observations agree with those of Andronico, Rasumow, and Jordan.

881. *Dietrich on Palpation of the Lymphatic Glands.*—The *résumé* of a paper on this subject, published in the *Viertelj. für Derm. und Syph.*, is taken from the reports of the Physical and Medical Society of Erlangen for 1886. The first part of the work deals with palpation of the glands in *health.* Of 439 healthy soldiers and students, some of the glands were palpable in 99 per cent., namely—the occipital glands in 2·2 per cent. ; the axillary in 72·4 per cent. ; the cervical and supraclavicular in 79·4 per cent. ; the cubital in 82·6 per cent. ; and the inguinal in 92·9 per cent. Excluding 121 cases in which some affection of the skin was present, and 98 cases in which there had been some preceding disease which might perhaps have influenced the adenopathy, there still remain 220 healthy persons, in a similar percentage of whom glands could be felt. It thus appears that in almost all healthy persons the glands are palpable in one or other region of the body. In the case of the inguinal, cubital, and cervical glands, those on both sides of the body are mostly affected, but as regards the axillary, the enlargement is as often on one side only as on both, while the occipital are usually palpable on one side only. In children up to twelve years old the glands can be felt more frequently than in adults. The number of palpable glands in the different regions of the body is greatest where most glands are normally situated, and diminishes with increasing age. The size of the glands does not depend on age, the average size being from that of a lentil to that of a bean. In the second part of the paper the condition of the glands in *syphilis* is dealt with. Of 50 patients with early secondary syphilis, the occipital glands were palpable in 8 per cent., the cervical in 98 per cent., the axillary in 90 per cent., the cubital in 72 per cent., and the inguinal in 100 per cent. Thus the percentage of palpable glands was greater in syphilis than in health, and the average number of glands in the several regions and their volume was also increased. Contrary to the opinion of most authors, but in accordance with that of Baümler, enlargement of the cubital glands is not looked upon as characteristic of general syphilis, for neither in size nor in number were these glands found to be larger in syphilis than in health. In the author's cases indeed, though perhaps this was accidental, the cubital glands were palpable more frequently in the healthy than in the syphilitic.

882. *Fraenkel on Syphilis of the Trachea and Thyroid Gland.*—At the autopsy of a woman, aged 41, Dr. Fraenkel found in the lower portion of the trachea a number of partially ulcerated gummy nodules and radiating scars, together with similar scars in the bronchi. Both bronchi were also surrounded by infiltrated rigid connective tissue, the left bronchus having thus become firmly adherent to the arch of the aorta. In these adhesions the left recurrent nerve, flattened and grey in colour, was embedded. During life there had been complete paralysis of the left vocal cord. The connective-tissue infiltration extended, though in a somewhat less degree, up to the lower third of the trachea. There was also a gummy infiltration in the thyroid gland, gummata of the liver and of one kidney, and bosses and depressions on the cranium. The presence of the diffuse indurative peritracheitis and peribronchitis, by no means a constant accompaniment of gummata of the trachea, is of importance as regards the etiology of the peripheral paralysis of the recurrent nerve. The author draws attention to the fact that the result of tracheal syphilis is by no means always the formation of stricture, but that, as in this instance, induration of the surrounding connective tissue may constitute the dangerous element in the case ; or implication of neighbouring structures, of the great vessels or œsophagus in gummatous ulceration, or the formation of mediastinal abscess, may be the cause of an unfavourable issue. The author remarks on the rarity of syphilitic disease of the thyroid gland, more especially in the acquired form of the disease, and also states that Lustgarten's bacilli were found in this case.

883. *Sokolowski on Syphilitic Narrowing of the Trachea and Bronchi.*—The author reports two fatal cases of this kind, in both of which the posterior crico-arytenoid muscles were paralysed. Tracheotomy was performed in both cases on account of dyspnœa. The paralysis of the crico-arytenoid muscles was attributed to the pressure of enlarged glands on the recurrent laryngeal nerve ; indeed, in one case this was proved by *post mortem* examination.

884. *Kraus.—A Statistical Contribution to the Pathology of Inherited Syphilis.*—These statistics are derived by Dr. Kraus from the policlinical department of Professor Monti. During fifteen years, among about 50,000 children treated there were 316 cases of inherited syphilis—that is, 0·68 per cent. In particular years the proportion fluctuated between 0·29 and 1·49 per cent. The number of boys and girls was about equal. As regards age, three-fourths of the patients, cases of relapse having been excluded, were under three months old. Relapses occurred at various periods, but in most cases not until after the fourth month of life ; about half the whole number relapsed. The most frequent early manifestation was the macular syphilide ; next came the papular, then the maculo-papular, and then the pustular syphilides and psoriasis. By far the commonest signs of relapse were condylomata. As regards the period at which the first signs of syphilis appeared, the macular eruption was observed in

forty out of forty-eight cases within the first three months. Enlargement of the spleen formed 20·36 per cent., and affections of the bones including pseudo-paralyses, 7·24 per cent. of all manifestations. Enlargement of the liver was found only in four instances. As far as could be ascertained, there were forty-three deaths, twenty-one of these occurring within the first three months of life. The cause of death was pneumonia and bronchitis in twelve cases, intestinal catarrh and enteritis in ten cases. Among the sequelæ of inherited syphilis, rachitis was noted in twenty-four cases, hydrocephalus in sixteen, and both together in seven cases.

ARTHUR COOPER.

885. *Hayem and Parmentier on the Spinal Manifestations of Gonorrhœa.*—The existence of gonorrhœal sciatica has been recognised, but less attention has been paid to the manifestations of gonorrhœa on the spinal cord. From time to time cases of paresis or paraplegia have been recorded in the course of a specific urethritis, but they were placed for the most part in the category of reflex urinary paralyses. Drs. Hayem and Parmentier quote six cases in which the following spinal symptoms followed an attack of gonorrhœa. 1. Disorders of sensation. Sciatic and crural neuralgias, a sense of constriction, tenderness on pressure of the spinal processes; tinglings, paræsthesia, disseminated patches of hyper- or an-æsthesia and slight muscular paresis. 2. Disorders of sensation and motion; 'lightning' pains, excessive hyperæsthesia, exaggerated reflexes, epileptoid trepidation, spasms, tremors, and muscular enfeeblement. 3. Motor troubles; various degrees of paraplegia. The symptoms due to an affection of the cord must be distinguished from those due to arthritis of the intervertebral joints which has also been observed in the course of attacks of gonorrhœa.

886. *Gilbert-Dhercourt on the Salts of Thalline in the Treatment of Gonorrhœa.*—The antiseptic properties of thalline are well known, and are most marked in the tartrate. Dr. Dhercourt uses a 1 in 50 or 1 in 100 solution of this salt in water charged with naphthol, injecting half a syringeful three times daily into the urethra. The scalding at once disappears, and in the course of a day or two the discharge progressively diminishes, and ceases in about a week. The effects are most satisfactory in acute cases.

ALFRED S. GUBB.

DISEASES OF CHILDREN.

RECENT PAPERS.

887. POTTER.—On the Treatment of Acute Tonsillitis in Children. (*Canada Medical Record*, vol. xvi., No. 9.)

888. SIMON, JULES.—On Infantile Broncho-Pneumonia. (*Boston Medical and Surgical Reporter*, vol. lvii., No. 27.)

889. SINKLER.—On Migraine in Children. (*Canada Med. Record*, vol. xvi., No. 9.)

890. WENDT.—On the Pathology and Treatment of Pertussis. (*Philadelphia Med. News*, No. 803.)

891. BESNIER, M.—On the Treatment of Facial Eczema and Simple Papulous Erythema in the Newly-born. (*Rev. Gén. de Clin. et de Thérap.*, June 28, 1888.)

892. LEGROUX AND PARAT, DRS.—On Infantile Typhoid Fever. (*Rev. de Thérap.*, July 15, 1888.)

893. MARSHALL.—On the Treatment of Congenital Hernia. (*Brit. Med. Jour.*, May 1888, p. 1056.)

894. SCHUCHARDT, DR.—On Sarcoma of the Vagina in Childhood. (*Centralbl. für Gynäk.*, No. 26, 1888.)

ART. 887. *Potter on the Treatment of Acute Tonsillitis in Children.*—The first point to determine is the presence of syphilis, rheumatism, or tuberculosis in the constitution of the patient; for these diseases, though possibly quite latent, have a potent influence upon the course of the malady. Excluding these varieties, which require the treatment special to their several diatheses, we have to deal with a sthenic inflammation which develops rapidly and continues at a great height for several days. The first indication, therefore, is to keep down the temperature and this is best done by antifebrin which should be cautiously given in five-grain doses every hour until nearly the normal degree is reached. Two or three doses are usually sufficient. If, as sometimes happens, it should have a distinctly depressant effect, some other antipyretic must be substituted. The second indication is to relieve the local distress; and, as a good deal of this is caused by the irritation of the highly acid secretion of the mucous membrane, the throat should be dusted with bicarbonate of soda. The disease under this treatment will rarely last more than from one to three days.

888. *Simon on Infantile Broncho-Pneumonia.*—The author devotes a few short paragraphs to the galloping and the pseudo-lobar varieties, but the bulk of the paper is occupied by a third form. In this, the onset is usually insidious and unexpected. In the course of an attack of whooping-cough, for instance, the skin one evening is observed to be hotter than usual, the cough less paroxysmal, but more frequent, and the throat red and congested. Unless this change in the symptoms is due to an intercurrent attack of measles, an attack of broncho-pneumonia may be expected, and the next day there will be intense dyspnœa, with livid skin and lips; while, on percussion, a shade of dulness will be detected in some places, and elsewhere tympanitic resonance. Auscultation will discover fine bubbling rhonchi predominating at the base of the lungs, and coarse rhonchi higher up. The temperature will be about 104° and the pulse 130 to 140 and small. After three or four days the symptoms will be less pronounced, but this lull, though very characteristic, is deceptive; the symptoms return the next day, with the addition of tympanitis, which increases the dyspnœa. Frequently a second temporary lull occurs, the entire duration of the disease being from three to four weeks. The uneven course of the disease is due to fresh portions of the lung being affected, whilst parts earlier affected are in a state of defervescence. The mortality is 80 per cent. in hospital, 50 per cent. in private practice. The differential diagnosis, as distinguished from croupous pneumonia, is fairly easy, but it is more difficult and sometimes impossible to distinguish between acute phthisis and broncho-pneumonia. In the former, however, it can usually be made out that the morbid signs diminish from above downwards. One essential point in the treatment is to keep the patient in bed, and if, owing to the tender age, this is impossible, the infant should be encased in a woollen sack with a shawl over it, when it can be supported on the nurse's lap. In any case the shoulders must be elevated. An emetic may be given at the onset, but not afterwards. Sedatives are contra-indicated, for one great indication is to rouse the respiratory

centre. Alcohol in some form is indispensable. Acetate or carbonate of ammonia should be given in such dose as can be borne without emesis, and sulphate of quinine night and morning in doses of three grains for a child of four years, or one grain for one of a year old. An occasional aperient is required to relieve the distension of the abdomen. At the commencement sinapisms should be applied to the chest. Afterwards the thorax should be dry-cupped morning and evening. The strength must be sustained by broths, gruels, whisked eggs, &c., and, if the cough be followed by vomiting, an effervescing water, or a few sips of unsweetened coffee will assist in allaying it. If restlessness be great, a little chloral may be given cautiously. The temperature of the room should not exceed 65°.

889. *Sinkler on Migraine in Children.*—The author remarks that this condition is much commoner in children than is generally supposed, and that not a few cases of headache attributed to disordered stomach are really cases of migraine. Many children begin to suffer from the characteristic attacks as early as 7 or 8 years of age, but when the complaint supervenes in childhood it usually disappears at puberty. The child thus affected is generally of nervous temperament, and his family history will probably elicit an account of similar attacks in his progenitors. Bad hygienic surroundings, over-study, imperfect vision, and insufficient sleep all stand in a more or less direct causative relation. The symptoms resemble those which obtain in adults. The attacks are markedly paroxysmal and periodic. Premonitory indications, if present, consist in chilliness, lassitude, and perhaps muscæ volitantes or flashes; these are followed by unilateral numbness of the tongue, or even amounting to general hemianæsthesia. Then the pain begins. It may affect but one side, but children as a rule describe it as being bilateral and usually frontal. The attack may terminate by vomiting, after which the patient falls asleep and awakes quite well, but sometimes the pain subsides very gradually. The treatment must be partly hygienic, and this will comprise plenty of fresh air, nourishing, and, if well borne, fatty food, short hours of study, and ten hours' sleep. Of drugs, cod-liver oil is the most valuable. Special anti-neuralgic remedies are seldom indicated, but sometimes the bromides in small doses over a long period will be found advantageous, and more especially in children of a markedly nervous temperament. The sight must be looked to, and any unsound teeth must be stopped or removed.

890. *Wendt on the Pathology and Treatment of Pertussis.*—The author considers that this disease is due to the presence of the bacillus described by Afasanieff. He has made a large number of observations, and has succeeded in demonstrating it in nearly all instances. In two respects, however, his experience differs from that of Russian observers; firstly, in that he usually failed to see it in the early stages, so that diagnosis was not much helped by the microscope; and, secondly, in that the pellet coughed up at the close of a paroxysm was found to contain several varieties of bacillus and not the special form 'in almost pure culture,' as affirmed by Afasanieff. As regards treatment, Dr. Wendt thinks better results are obtained by attention to the general health than by any medication directed against the life of the microbes. The most useful drugs in his practice have been bromide of potassium and antipyrin. The latter is given to young children in doses of from one-seventh of a grain dissolved in raspberry syrup, three times a day during the course of the disease. While not agreeing with Sonnenberger that it is distinctly curative, Dr. Wendt willingly allows that it favours an easy course of the disease, mitigating the severity, and possibly diminishing the number, of the paroxysms, and certainly making complications less frequent. RALPH W. LEFTWICH, M.D.

891. *Besnier on the Treatment of Facial Eczema and Simple Papulous Erythema in the Newly-born.*—Dr. Besnier recommends the following lotion, to be applied with the finger every hour, in the irritation of the gums accompanying the eczema of dentition: ℞ Glycerin 10 parts, distilled water 10 parts, bromide of potassium 1 part, and cocaine $\frac{1}{10}$th part. Bromide may at the same time be given internally. As a local application for the eczema he recommends 1 part in 3 of oxide of zinc and vaseline. In the seborrhœal variety the following ointment gives good results: ℞ Resorcine (or sulphur) 1 part, oxide of zinc 10 parts, vaseline 100 parts. In the simple papulous erythema of the newborn child the skin should be dusted with a mixture of equal parts of Venetian talc, oxide of zinc, and starch powder, to which 2 per cent. of boracic acid is added.

892. *Legroux and Parat on Infantile Typhoid Fever.*—If the diarrhœa be somewhat profuse the authors recommend: ℞ Naphthol β, salicylate of bismuth, āā 45 grains, to be divided into ten doses, one of which is to be given every hour, either in a wafer or stirred up in a little milk. If the diarrhœa is not troublesome they give the naphthol alone, while if there is a tendency to constipation they add from 46 to 60 grains of salicylate of magnesium.

ALFRED S. GUBB.

893. *Marshall on the Treatment of Congenital Hernia.*—In the *Brit. Med. Jour.*, May 1888, p. 1056, Dr. Marshall states that during the year 1887 forty-one cases of congenital hernia (all boys) were treated at the Children's Hospital, Nottingham. Each of these cases was treated by the wool-truss suggested first by Mr. Coates, of Salisbury, and described fully by Mr. Pye in the *Journal*, May 28, 1887. In every case either a congenital phimosis existed, or an imperfect urethral opening, and sometimes both. Twenty of the cases were completely cured, nine were lost sight of, and out of the twelve not well at the end of the year it was found necessary in ten of them to treat the phimosis more energetically, or to enlarge the urethra. The importance of the size of the urethra is not recognised sufficiently, and if there be any difficulty in passing water after the phimosis is reduced, then the urethral orifice should be slit at once. The author remarks that he is confident of the success of the treatment of these cases by the wool-truss, which is quite sufficient to ensure closure of the canal when the nutrition is maintained, and he has always noticed that 'breast' babies always do well.

RICHARD NEALE, M.D.

894. *Schuchardt on Sarcoma of the Vagina in Childhood.*—A paper on this subject was read by Dr. Schuchardt during the second Congress of the German Gynæcological Society at Halle, May 1888. Seven cases had already been described (Ahlfeld, Sänger, Babès, Demmel, Soltmann, Hauser, and Steinthal). The ages ranged from two to five; in only one was the tumour observed at birth. The growth usually

formed a tuberous elevation like a bunch of grapes; it was in every case very malignant in its course. Dr. Schuchardt described two more cases, which both underwent operation in Professor Volkmann's wards. One occurred in a child aged seven; she died two months after operation from recurrence. The second case was exhibited at the Congress. The child was about five years old. Early in 1885 a swelling like a bean was seen to protrude from the vagina during a fit of coughing. In September 1885 the tumour was removed, together with a piece of the vaginal wall about 'the size of a ten-pfennig piece.' A little over six months later, local recurrence took place; a growth the size of a walnut was removed with half of the posterior vaginal wall. The cut margin of the remaining part of the vagina was drawn down and sewn to the perineum. The wound healed by first intention, and the child was free from recurrence when exhibited. Both of the excised tumours were papillomatous, and appeared, on microscopic examination, to be round-celled sarcoma. Dr. Schuchardt traced the growth to papillary structures in the region of the vulva.

Alban Doran.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

895. Kinnear.—On Hay Fever as a Disease of Central Nervous Origin. (*New York Med. Record*, July 1888.)

896. Graupner, Dr.—On the Treatment of Tabes Dorsalis. (*Der Aerztliche Practiker*, July 2, 1888, and *Der Fortschritt*, No. 14, July 20, 1888.)

897. Giovanni, Dr. A.—A Singular Case of Hallucination. (*Rivista di Freniatria*, vol. xii., fasc. 4.)

898. Lannois, Dr.—On Hereditary Chorea. (*Bull. Méd.*, July 29, 1888.)

899. Domenico, Dr.—On a Case of Spastic Paralysis. (*Gazz. deg. Osp.*, July 25, 1888.)

900. Babinski, Dr. J.—On a Special Deformity of the Trunk caused by Sciatica (*Sur une déformation particulière du tronc causée par la sciatique.* (*Archiv. de Neurologie*, vol. xv., No. 43.)

901. Bum, Dr. Anton (Vienna).—*Massage in der Neuropathologie.* (*Deutsche medizinal-Zeitung*, 1888, No. 51.)

902. Schueller, M.—*Die Verwendung der Nervendehnung zur operativen Heilung von Substanz-Verlusten am Nerven.* (Nerve-stretching as an adjunct to the operation of suture of divided nerves.) (*Centralbl. für d. med. Wiss*, 1888, No. 27).

903. Shattuck, George B. M. D.—Three Cases of 'Hereditary Locomotor Ataxia' (Friedreich's Disease). (*Boston Med. and Surg. Journal*, Feb. 16, 1888.)

904. Eulenburg, Prof. A.—*Ueber das Verhalten des galvanischen Leitungs-Widerstandes bei Basedow'scher Krankheit* (On the behaviour of the resistance to the conduction of the galvanic current in Basedow's disease). (*Deutsche med. Zeitung*, 1888, No. 51.)

905. Berdach, Carl.—On the Action of Antipyrin. (*Medic-Chirurg. Centralbl.* 1888, No. 23.)

906. Blocq, P.—On an Affection characterised by Astasia and Abasia (*Sur une affection characterisée par de l'astasie et de l'abasie*). (*Arch. de Neurologie*, vol. xv., No. 43.)

Art. 895. *Kinnear on Hay Fever as a Disease of Central Nervous Origin.*—In the *New York Med. Record*, July 1888, p. 32, Dr. Kinnear presents an hypothesis in which he attempts to show that hay-fever, in its immediate symptoms, may be accounted for by an abnormal condition of central nerve-cells. Reasoning by analogy, the author considers that the nervous centres furnishing nerves to the apparent seat of the disease are in an abnormal condition and constitute the primary disease. In order to draw away the blood from these hyperæmic nerve-centres, Dr. Kinnear applies an ice-bag to the spine from the fourth cervical to the second or third lumbar vertebra, two or three times a day for an hour or more each application. This causes a dilatation of the arterioles throughout the whole body, evenly distributing the circulation and withdrawing from the excited nerve-centres their excess of blood. Some cases are recorded in which marked success attended this plan of treatment and a further trial of it is strongly recommended.

Richard Neale, M.D.

896. *Graupner on the Treatment of Tabes Dorsalis.*—By proper treatment the remissions in tabes may be materially favoured and assisted, but no complete cure will be realised. If there is any suspicion of syphilitic origin of the disease, the treatment ought to commence with unctions of the mercurial ointment, 4 grammes (1 drachm daily), on the whole about 80 grammes (two ounces and a half). During the commencement of the mercurial treatment, frequently an aggravation of the symptoms has been observed. The unctions are followed for some length of time by the use of iodide of potassium (5 : 150) three times daily, with the addition of 0·05 grammes (five-sixths of a grain) of extract of belladonna, in order to counteract the concomitant effects of the iodide of potassium. For the after-treatment the springs of Nauheim (Hesse-Darmstadt) and Tölz (Bavarian Alps) are recommended. If iodide of potassium disagrees, the more expensive iodide of sodium has to be substituted. Also in case there be no syphilis, a prolonged use of iodide of potassium may be tried (Leyden). Of nitrate of silver, which has as many advocates as detractors, one pill is given three times daily. ℞ Argent nitrat. 0·3 (five grains), Argillæ q. s. ut f. pill. No. 30. Antipyrine in three doses of 2 grammes (half a drachm) each has proved beneficial in radiating pains and other exacerbations; but still more efficient is the antifebrine in large doses of 0·5 (eight grains) of which two powders within one hour. For the same purpose may also be given as a subcutaneous injection (℞ Antipyrinii 2·5–3·0, two scruples to two scruples and a half, dissolved in 5·0 (four scruples) of distilled water, one Pravaz's syringe-full). This injection is very painful, wherefore it has been recommended by French doctors, to inject only the contents of a few graduations, and to continue after five to ten minutes' rest, and in that manner the first portion of the injection will produce local anæsthesia, and the remainder of the fluid will be less painful. It has also been recommended to precede the full injection of the antipyrine by a cucain injection (℞ cucaini hydrochlor. 0·1 [one grain and a half] dissolved in 10·0 [three drachms] of distilled water; one syringe-full). Injections of morphia, however, will, notwithstanding, in many cases be necessary. Ewald recommends against incoordinate movements subcutaneous injections of half a syringe-full of salicylate of physostigmine (0·02 [one-third of a grain] in 10·0 [three drachms] of water). Its occasional concomitant effects are vomiting and vertigo. In the torpid forms of tabes a carefully superintended

hydropathic treatment often proves useful (Zuckmantel). In these forms the saline baths of Nauheim, Oeynhausen-Rehme (Westphalia near Minden), Kissingen (Bavaria), and Cudowa (Prussian Silesia, near Glatz, 1,220 feet above the sea) will be suitable, and for excitable patients the more indifferent baths of Teplitz (Bohemia) Wildbad (Würtemberg) and Gastein (Salzburg). At home, warm bran or weak sulphur baths will be beneficial—(1 to 3 pounds of bran boiled with 1 gallon or 1½ gallon of water, and added to the water of the bath—or sulphate of potassium 1½ ounce to 3½ ounces for one bath. Preferable to the latter, as being devoid of offensive smell, will be the same quantity of sub-sulphate of sodium with the addition of 1 ounce of vinegar. An ointment of balm of nutmeg (Ung. Myristicæ), camphorated spirit or other derivants may conveniently be applied to the spinal column. The application of the constant and induced current, best during one month every year, to the spinal column, frequently acts beneficially. The constant ascendant and descendant current, weak currents, and the induced current by means of the Faradaic brush, are generally employed. Prof. Hirt (Breslau) recommends the combined method with Dr. Wattenwille's apparatus. The dietetic treatment must be strictly regulated; easily digestible, nutritive food must be taken, the rest of the treatment to consist of avoidance of every kind of psychical excitement and over-exertion; daily walks, but without fatigue, to be taken. FERD. ADALB. JUNKER, M.D.

897. *Giovanni on a Singular Case of Hallucination.*—In the *Rivista di Freniatria*, vol. xii., fasc. 4, Dr. A. Giovanni describes the case of a neurotic woman who for a long time had a series of nervous symptoms which ended in a peculiar form of hallucination. The patient saw continually before her faces and figures which changed every moment in expression, and when she contracted some of the muscles of the face and neck the hallucinations likewise appeared to make the same motions, altering both their position and physiognomy; in short, whatever she did the apparitions seemed to do. Dr. Giovanni judged this to be a case of indirect suggestion, acting automatically in the waking state. He finishes his paper with an attempt to explain the phenomena based on physiology and pathology.

W. W. IRELAND, M.D.

898. *Lannois on Hereditary Chorea.*—The author brought before the French Society of Medical Sciences two patients, brother and sister, suffering from hereditary chorea, an affection which has not hitherto received much attention. They belonged to a family of which several members suffered in a similar way. He states that the malady is one of adults and middle-aged persons, though it sometimes shows itself before 20 years of age. More frequently it only manifests itself at from 45 to 50 years of age. The only essential cause appears to be heredity. In every case the father or mother of the sufferers was choreic; and when the child of a choreic patient escapes, the offspring of the child remain exempt. The most salient feature of this affection, which in many points resembles the chorea of Sydenham, is the ability, by an effort of the will, to cause a momentary cessation of the disordered movements. The period of invasion is always protracted and its course tedious, lasting, as it may do, for from twenty to thirty years. Sooner or later psychical troubles supervene, in consequence of which these patients often gravitate into lunatic asylums. Hereditary chorea must be distinguished from several disorders which resemble it more or less nearly, more especially from convulsive spasms (*tics*). Choreic movements in adults or aged people are generally of this kind. No treatment seems to have any effect upon the intensity or duration of the malady. ALFRED S. GUBB.

899. *Domenico on a Case of Spastic Paralysis.*—At the January meeting of the Medico-Chirurgical Society of Pavia Dr. Domenico showed a girl, aged 9 years, who eight months previously began to suffer from weakness of the right leg, which gradually increased and spread to the left side. Subsequently a remarkable condition of intermittent contracture was developed affecting the trunk muscles as well as the legs. It could be easily produced at any time by lightly stroking the muscles, by making the patient sit up or endeavouring to place her in the upright position. Finally, incontinence of urine and fæces was superadded. The patient died about six weeks later, and at the autopsy the calvarium was found much thinned, and the dura mater very firmly adherent, and, in fact, inseparable from the cerebral hemispheres, especially the parietal and occipital lobes. The adhesions were due to the presence of innumerable tubercular nodules, from the size of a pea to a filbert, situated in the grey matter, which was softened around them. The nodules were found chiefly in the parietal and occipital lobes, but there were also a few small ones in the left temporal. They were most numerous in the left hemisphere. In the other parts of the brain the convolutions were flattened; the ventricle, especially the lateral, were distended with fluid, and at the base the membranes were somewhat sodden and opaque, but there was no definite meningitis. The cervical dura was thickened and there was an excess of fluid both within it and between it and the vertebral canal. The lungs and the peritoneum were studded with miliary tubercles, and the former contained larger caseous nodules as well. The medulla and the spinal cord were subjected, after hardening, to a careful microscopic examination, but nothing abnormal was found. The absence of any sign of sclerosis of the pyramidal tracts was specially noted and caused much surprise, as the spastic symptoms during life had been attributed to spinal lateral sclerosis. But the author states that although lateral sclerosis as a secondary affection, in the form of descending degeneration, and as a portion of more extensive changes has been amply demonstrated *post mortem*, the existence of lateral sclerosis as a primary independent limited system lesion does not yet rest upon any pathological evidence, but is a matter of inference. H. HANDFORD, M.D.

900. *Babinski on a Special Deformity of the Trunk caused by Sciatica.*—Dr. Babinski, *chef de clinique à la Salpêtrière*, devotes a long article, with drawings by Professor Charcot, to the consideration of a peculiar attitude observed in persons affected with sciatica. Professor Charcot first remarked this attitude in a private patient, and illustrated it. Shortly afterwards an out-patient presented himself at the Salpêtrière with exactly the same attitude. Charcot now announces when he notices at a distance a fresh patient with this carriage of the body, not only the existence of sciatica, but its site. Babinski brings forward five cases, two of which were communicated by Charcot. The attitude is differentially diagnostic of sciatica, and may be summed up by saying that the patient leans

on one side—the side opposite to the affected side—but in a peculiar way. Taking a case in which the sciatica was on the left side, the description is as follows :—'When the patient is standing he is seen to rest most of his weight on the right leg ; the trunk deviates much to the right, and is slightly flexed at the pelvis. The right shoulder is higher than the left. The lower ribs on the right side approach the iliac crest. The vertebral column presents two lateral curvatures : the lower one with its concavity to the right, the upper with its concavity to the left. Both plantar surfaces rest on the ground. This attitude cannot be modified, and the deformation persists when the patient lies down ; he cannot lie on his belly, and when he is on his back the thigh is slightly flexed on the pelvis, and the leg on the thigh.' The shoulder of the affected side was higher in this case. In one case it was on the same level as the other, in two cases it was higher, and in two cases it was lower, so that no rule can be drawn as to the shoulder. The trunk is carried in the same way in all cases, and the double lateral deviation of the spine is always present, 'the lower one (lumbar) with its convexity towards the affected, the upper one (dorsal) with its convexity the opposite way.' The lower border of the ribs on the side opposite to the sciatica always approaches the iliac crest. Lastly, although the patient rests chiefly on the healthy limb, the opposite foot is quite as much in contact with the ground in its whole extent. These three are the chief characteristics of this special attitude, which is more marked when the patient is fatigued, and which is in closer connection with the intensity of the pains than with the duration of the malady. By this attitude it is easy to see that the sciatic nerve is less compressed by the muscles ; for the same reason no part of the foot is raised though the other foot bears the weight.

901. *Bum on Massage, &c.*—This concise article embraces the whole subject ; the following is a summary :—A. The effect of direct massage of the nerves. This comprises pressure over the nerve, centripetal stroking and rubbing, and rapidly intermittent slight blows. The affections under consideration here are neuralgias, anæsthesias, cramps, and peripheral paralyses. I. *Sensory nerves.* 1. *Neuralgias.* The idiopathic kinds are the most favourably influenced. The mode of treatment is simple and easily learnt. As an example take a case of typical neuralgia of the fifth nerve. The painful spot is first found ; this is done with precision only during an attack. Avoiding this spot, the whole region supplied by the nerve in question is lightly stroked in the centrifugal and centripetal directions. Then follows a somewhat energetic palpation of the painful spot, a strong pressure being often better endured than a light one. A pressing and rotatory movement of the pulp of the middle finger is employed ; the sittings last five or ten minutes daily. Very old cases may thus be perfectly relieved within a few weeks. The indications are the same in other neuralgias, whether of the head, trunk, or limbs. Rheumatic sciatica, the treatment of which consists in energetic effleurage over the great sciatic, the use of the *percuteur*, and strong palpation of the tender spots over the sciatic notch and in the hollow of the knee, is quickly cured, but the masseur has a more difficult problem to solve when the pain is due to inflamed nerve-sheath, or exudations in its vicinity. Those hemicranias (idiopathic headaches) in which painful spots are found in the head and neck must be classed amongst the neuralgias. Very often nodules of various sizes and hardness are found at these spots ; these nodules must be looked upon as in part the products of a myositis or a peri- or para-neuritis, in part the sequelæ of hyperæmic swelling of the neurilemma. In the myopathic form numerous successes are reported as due to massage. Norström had twenty-one cures out of twenty-nine cases of migraine ; the author had five successful cases. The joint-neuroses are treated of in an appendix. 2. *Anæsthesias.*—In only a few forms is massage of much benefit here. According to Erb the aim of direct treatment of the nerve is the restoration of its lowered excitability. II. *Motor Nerves.—Cramps.* The mechanical treatment of cramp in the regions of the trigeminus, facialis, hypoglossus, and accessorius is only useful when it is due to rheumatism. In doubtful cases the experiment decides the diagnosis. In cramps of the muscles supplied by the brachial and cervical plexus, massage usually gives favourable results, while it is useless in respiratory cramp. Amongst the 'neuroses of vocation' writers' cramp takes the first place. Benedikt distinguishes a spastic tremulous, and a paralytic form ; of these the first, occurring as tonic and chronic cramps of one or more muscles, is the most frequent. Of nine cases, all neurasthenic individuals, treated by the author, eight belonged to this form. The treatment demands perseverance. At starting, the patient is asked to write that the form of the cramp may be determined. The sittings last daily ten or fifteen minutes. Besides effleurage of the whole arm, the lumbricales, interossei, and all the muscles of the upper arm are energetically rubbed, and the sitting ends with passive movements of all the fingers and the wrist. A warm bath may precede the sitting, and after it the fingers may be bandaged. All writing must be imperatively countermanded, but any other kind of manual work is to be recommended, *e.g.* rowing, swimming, gymnastics, &c. As the patient improves, writing may be allowed, but never for long without pauses of rest. The only case of writers' cramp which was permanently cured by the author belonged to the paralytic form. Other forms are sewers', telegraphists', musicians', bicyclists' cramp, &c. Transitory cramps of single muscles, *e.g.* cramp of the calf of the leg, are relieved at once by massage. But peripheric contractures are scarcely affected by it. B. Indirect massage. By this it is attempted to alleviate certain symptoms by improvement (locally) of the circulation and nutrition. I. *Diseases of the Central Nervous System.*—Massage of the neck is employed against hyperæmia of the brain and covering. Spinal diseases. Massage is not of much use here. It may, however, supplement other methods in paralysis and tabes. II. *Functional Neurosis. Chorea Minor.*—Treatment of St. Vitus's dance consists in general massage of the body (daily rubbings and strokings of the chest and all the limbs), and in methodical muscular exercise, by a gymnastic course ('Heilgymnastik'). *Neurasthenia and Asthenia.*—The author recommends the mechanical treatment of these conditions, both locally and generally. The physician should himself supervise the treatment, and the patient should never be isolated.

902. *Schüller on Stretching in Nerve-suture Operations.*—In a case of median paralysis due to a severe accident, the nerve being torn across,

Schüller stretched the central end, and drew it forward sufficiently from its connections before uniting it to the peripheral portion. A gap of four centimètres can thus be bridged across by stretching. If the defect exist near the peripheral endings of the nerve only the central portion is stretched; if higher up, both ends may be thus treated. The result was favourable, and it is added that while cold applications proved prejudicial to the conducting powers of the newly-healed nerve warm local baths were of the greatest benefit.

903. *Shattuck on Hereditary Locomotor Ataxia.*—A boy, aged 14, came under Dr. Shattuck's care in November 1887. Had some unknown illness when 4 years old, but was afterwards quite well. Six years ago, when 8 years old, he noticed that he stumbled when he walked; since then his walking became yearly more difficult. Digestion and sleep were good, there were no pains at any time, the eyesight was good, and the sphincters acted normally. Temperature, pulse, and respiration were normal, also the urine. The pupils reacted to light and accommodation; there was a slight lateral curvature of the spine. There was a soft systolic murmur, loudest at the base of the heart, to the left of the sternum; the cardiac area was normal. The gait was markedly ataxic; he also wrote with difficulty, and only when steadying the hand; he could not hold a glass of water, or carry it to his mouth. There were slight oscillations of the head, increasing when he spoke; the speech was jerky and ataxic. The grasps were strong, R. 95, L. 85. The knee-jerks were absent, the plantar reflexes present, the sensation over the legs was slightly diminished, and transmission slightly delayed; he could not distinguish a pin-point drawn across the leg from one drawn up and down. The trouble with the speech began two years ago. Parents each about 50 years old, healthy and strong; had ten children in all. One brother (the third child) and one sister (the youngest, and next to patient in age) are affected like him. Family history unusually good otherwise. The affected brother is now aged 24; the gait showed unsteadiness at the age of 7, and he has lost the use of his legs for the last eight years. He is otherwise well, but weak; there is a bad spinal curvature. The sister, now aged 10, walked unsteadily and was soon tired at the age of 5; she also has spinal curvature. All the rest are strong and healthy. Taken into connection with a considerable proportion of the other cases hitherto reported, these cases tend to show that the term 'hereditary' ataxia is a misnomer and misleading; the term 'Friedreich's' ataxia—Friedreich first reporting and recognising the disease—is open to the objection common to all such names—namely, it describes nothing. It is probable that the disease in these cases and in others was of an older date than the first described symptoms; that it was, in fact—in contrast to true locomotor ataxia—a want of development rather than a degeneration of the spinal cord.

904. *Eulenburg on Resistance to the Galvanic Current in Basedow's Disease.*—According to Vigouroux and Charcot this resistance is very much lessened in Basedow's disease. When in this disease one electrode is placed on the sternum and the other on the back, the galvanometer shows a larger excursion than in health. According to the above authors this is a cardinal symptom. It has been already examined by Martius (*Deutsche med. Zeitung*, 1888, p. 570), and Eulenburg has investigated it with the following result. It appears to be a fact that resistance to the passage of the galvanic current is more or less lowered in Basedow's disease, when tested as above. Besides this there is (though not always) a temporarily much quickened course of the resistance-curve, in other words, a rapid appearance of the minimum of resistance. But the above-mentioned lowering of resistance is by no means a constant and pathognomonic symptom of Basedow's disease, for the resistance may be normal and even increased. The lessened resistance therefore in otherwise doubtful cases may decide the diagnosis, but its absence proves nothing, for the same effect might be caused by hyperidrosis with a thin epidermis, also by distension of the cutaneous vessels, perhaps also of the deeper, in consequence of higher susceptibility of the vaso-motor nervous system.

905. *Berdach on the Action of Antipyrin.*—The following is a summary of the author's observations, which were made in Prof. von Bamberger's clinic: '1. Antipyrin injected subcutaneously takes effect in all painful diseases mostly after a few seconds; its influence lasts at least six hours. 2. The effect depends apparently on local influence of the nerve-endings (analgesic zone, lessened function of the peripheral nerves,—Sée) and on restriction of reflex action. 3. Antipyrin has a cataphoric action which is far below that of cocaine. 4. It does not appear to have any unfavourable influence on the general condition, and is never contra-indicated.' Whether antipyrin possesses any specific influence in acute rheumatism, as asserted by Alexander, Demme, Neumann, and A. Fraenkel, the author cannot from his own observations decide, but injections in this disease were always of benefit. Antipyrin used subcutaneously is a remarkable anodyne which does not act upon the system injuriously, and can therefore be freely used, unlike morphia in this respect.

906. *Blocq on an Affection characterised by Astasia and Abasia.*—Other terms used to indicate this affection are 'motor incoordination for standing and walking' (Charcot and Richer), 'hysterical motor ataxia' (W. Mitchell), 'ataxia in default of automatic coordination' (Jaccoud). 'The motor incoordination for standing' of Charcot and Richer is conveniently expressed by the simple term 'astasia,' and the similar term for walking is 'abasia' (Blocq). For the earliest account of this affection see the Italian *Medicina Contemporanea*, 1883, which contains an article thereon by Charcot and Richer. The author has amassed eleven observations, which are given mostly in detail in the above article. The essential characters of this affection are sufficiently striking to prevent confusion with any other form of incoordination, except in particular instances. The ataxia is not at all like that of tabes dorsalis; the feet are not suddenly projected forwards; other modes of progression than walking are easily executed—*e.g.* leaping; further, the reflexes are retained, and ocular troubles, lightning pains, vesical trouble, &c., are never complained of. From Friedreich's disease this affection is distinguished by the facts that in the former the incoordination is equally manifest whether the patient is standing, or sitting, or lying down, that the upper limbs are affected, there is (often) nystagmus, with embarrassed speech, and loss of reflexes, and the course and prognosis differ.

As to hysterical ataxia, as defined by Briquet, and afterwards Laseque—*i.e.* motor incoordination shown by the limbs deprived of muscular and articular sense when the eyes are closed, this definition itself excludes astasia and abasia. When standing and walking are quite impossible, hysterical paraplegia may be simulated to some extent. Now this paralysis occurs under two well-defined forms—viz., with flaccidity and with rigidity. In the latter case the contracture is too slight to present any difficulty of diagnosis. In the former, or flaccid paralysis, there is real diminution or abolition of dynamometric force, which is as evident when the patient is sitting or lying down as when walking. In chorea, not the common form (which affects the face and upper limbs, and persists in decubitus), but hysterical chorea, the rhythm, even in the latter, is peculiar and intermittent, and all other modes of progression, besides walking—*e.g.* jumping, going on knees and elbows—are equally impeded. Bamberger's 'saltatory reflex-convulsion' might possibly mislead, for here also the patient seems quite well when seated. But in this disease the affection shows itself by repeated rapid jumps (4 or 5 inches high), which continue till the patient falls exhausted. The same convulsive movements occur when, the patient being seated, the soles are tickled. There is here an exaggeration of the tendon-reflexes, or, as Erb would say, a symptom like epileptoid trepidation, showing itself by the sudden rising of the point of the foot in patients affected with spasmodic paraplegia. Erlenmeyer's 'static convulsions,' though ranked by himself amongst Bamberger's 'convulsive jumps,' present, it is true, great similarity with 'astasia.' The symptoms in Erlenmeyer's published case are almost identical with those of the typical case of 'astasia' so often made the subject of Charcot's lessons. But they differ from those of Bamberger's disease in that the jumps do not occur immediately the foot touches the ground, they do not continue till the patient is exhausted, and lastly, neither percussion nor tickling of the soles will produce them. Spasms from overwork of muscles, 'vocation-spasms,' only occur when the particular occupation is performed. The symptoms in astasia may come on suddenly, usually after some emotion; either sex is affected, the age is usually just before puberty, or that of young adults. The patient is apparently quite well and strong when sitting, and all movements are executed with force and precision, but the moment he rises he is almost or entirely unable to stand or walk, and bends about 'as if made of cotton.' If assisted on each side, the feet are dragged along, scarcely leaving the ground, the legs appear dislocated, and 'contradictory' and incoordinate movements are made; or the limbs may become rigid all at once, forming a right angle with the trunk. Sudden flexions and extensions may occur, and compensatory contorsions of the head and upper limbs then take place. The movements are unsymmetrical and never rhythmical. The effect of closure of the eyes varies in different cases. The tendon-reflexes are normal, and there is no ankle-clonus. Curious to say, other modes of progression may perhaps be effected easily—*e.g.* jumping, or going along on knees and elbows, or crawling on the hands and feet. The patients have their favourite modes of progression; one makes little jumps with both feet close together, another sits on a chair and pulls it under him by successive efforts, as we sometimes approach a table when seated near it. There is, in short, purely functional incoordination. The cause is usually some emotion or accident. One case occurred after childbirth, another after typhoid fever. Sometimes no cause can be assigned; the patients are evidently predisposed, as the usual concomitance of hysterical stigmata implies. The prognosis is in general favourable. The course of the affection is capricious. In one case it disappeared in twenty-four hours, after being present for months, and afterwards reappeared and lasted some time. Usually it remains stationary for a time (from three months to fifteen), and then ceases abruptly, but relapses are by no means uncommon. Occasionally some organic alteration may underlie the symptoms, in which the prognosis would be very different. The treatment goes on the latter supposition, and is that applied by Charcot to hysterical subjects—viz., 'moral' treatment, isolation, shower-baths, cold baths, &c. The author enters into an ingenious disquisition on the physiology of the acts of standing and walking. While learning how to do these our cortical centres are employed more than the spinal, but gradually these acts become more automatic, the cortical *rôle* becomes less immediately important (except as to the initiative), and the spinal centres do all the work. Charcot's illustration is very apt, viz., the spinal cord represents the brass cylinder of a musical box, with little points projecting from its surface; the arrangement of these points determines the kind of tune. The cortical centres represent the stop which sets the machine in motion—the author adds, that the same spring in the organ stops the movement and changes the tune. In the present state of our knowledge it would be equally rash to say that in 'astasia-abasia' the seat of mischief is in the cortex only, or in the spinal cord only. The facts revealed by the mode of 'suggestion' to hypnotised hysterical subjects are very instructive. One such individual, on being told—'You cannot walk'—bent her legs and fell down at once, unless supported. But the same person on being told—'you do not know how to walk'—presented a characteristic incoordination at once, she staggered, the knees bent, and the trunk was at the same time inclined forwards and then straightened. This went on alternately in an exaggerated manner. The first speech suggested complete motor powerlessness; the second a relative powerlessness, of which the incoordination was the translated result. 'Emotional paralysis' is frequently observed in fact, both in animals and in man. Now, as in 'unconscious cerebration, all we are aware of is the result as thought out without our knowledge, so in 'astasia-abasia' the idea of a motor powerlessness (or difficulty) may develop without the patients' being aware of it. There is no doubt that the disorder is a purely dynamic one, without appreciable material lesion anywhere; the observations show that it may co-exist or alternate with various hysterical symptoms. 'Nevertheless the affection occupies certain regions in the nervous centres, certain organs, which put into action primarily or secondarily in a case of organic lesion, must determine clinically the same symptomatic *ensemble*.' [It appears that *absolute inability* to walk or stand is not often observed in this affection, hence the terms 'astasia' and 'abasia' do not seem to be the best that might be chosen; the terms 'dystasia' and 'dysbasia' would perhaps be more appropriate.—*Rep.*]

E. J. Edwardes, M.D.

REVIEWS.

Article 907.

On the Treatment of Rupture of the Female Perineum, Immediate and Remote. By G. Granville Bantock, M.D., F.R.C.S.Edin., Surgeon, Samaritan Free Hospital; ex-President, British Gynæcological Society, &c. Second Edition, with Twelve Illustrations. London: H. K. Lewis. 1888.

The first edition of this work appeared in 1878; the author advocated a specially simplified method of repairing lacerations of the perineum by suture; in the new issue he records further experience. In preference to the long curved needle set in a handle, he now employs Hagedorn's well-known needle and holder. Dr. Bantock is an opponent of rapidity in operations of this kind. 'I regard it,' says he, 'as a positive disadvantage that one is able to complete this operation in ten minutes. In a freely bleeding case it is impossible to arrest the bleeding within the time, and I know of several cases—done under this rapid method—which have broken down, apparently from this cause.' The author has discarded opium in after-treatment, for he finds that the pain is usually slight and that the drug promotes sickness, and, as a rule, constipates the bowels too much. Dr. Bantock insists that 'in no case should alcohol be administered.' This treatise shows how experience ever tends to convert a complicated operation into a simple operation, and to prove that many details in after treatment once deemed necessary are to be discarded as useless or dangerous.

Alban Doran.

Article 908.

Austrian Health-Resorts and the Bitter Waters of Hungary. By W. Fraser Rae. Crown 8vo., pp. 292. London, 1888: Chapman & Hall.

This volume is very entertaining, and contains much information about bath life, which will prove useful to visitors to health-resorts, and more especially to the Austrian ones which are described in it. Mr. Rae is not a medical man, nevertheless many useful hints on medical subjects may be got from his writings. For instance, these are suggestive remarks worthy of consideration:—'It is noteworthy that while at any Austrian health-resort to which invalids are sent to pass the winter months, a large bath-house is regarded as an indispensable adjunct, no corresponding arrangement prevails at the winter houses on the Riviera. If the same attention were paid at them to this important point of hygiene, possibly the physician might boast of more cures. Perhaps the Austrians place too much trust in bathing, and in the Riviera too much confidence is reposed on sunshine and soft air: a judicious combination of the two is the golden mean.' Again, 'a small sum of money expended in making various English southern coast resorts better known and better worth visiting, a little organisation on the Austrian model, would make them as much appreciated as they deserve to be.' The author justly points out that there is no reason why the Carlsbad treatment should be called so lowering—a common notion, and one which we have heard expressed by the doctors of rival spas.

Some of the places treated of are comparatively well known in different degrees to the English—as Carlsbad, Marienbad, Franzensbad, Teplitz, Ischl, and Gastein. Others they have little or no acquaintance with—as Baden, near Vienna, Vöslau, and the strong iron springs of Roncegno and Levico, in the Southern Tyrol. The accounts of these last, and of Buda-Ofen with its baths and bitter waters, also of Mattoni's natural manufactory of peat earth, impregnated with mineral water, at Soop, and the descriptions of Me ran and Arco are the portions of the volume which possess to us most novelty. The full accounts of Meran and Arco are very welcome. The book is rendered the more readable by the occasional introduction of information on more general subjects. For instance, we are given some ideas about Bohemian and Hungarian politics. The author dwells with evident pleasure on the many visits of Goethe to Carlsbad and other health-resorts, and of W. v. Humboldt to Gastein. Nor are potentates forgotten; for instance, Peter the Great. The benefactions of a certain Count Findlater to Carlsbad are duly chronicled. The name looks foreign at first sight, but it is merely that of a Scotch peer, whose title has since become extinct.

On the whole it is obvious that this volume supplies matter which will be interesting to readers of very various tastes.

J. Macpherson, M.D.

Article 909.

A Handbook of the Theory and Practice of Medicine. By F. T. Roberts, M.D., B.Sc., F.R.C.P. Seventh Edition. London: H. K. Lewis, 136 Gower Street. 1888.

The seventh edition of this popular manual of the theory and practice of medicine fully maintains the reputation of its predecessors. It is written up to date, and has been revised throughout and rewritten, and rearranged in parts.

Amongst subjects which receive full consideration in this edition may be mentioned myxœdema, the investigations of Professor Kocher, of Berne, on the results of experimental extirpation of the thyroid body being duly put forward in explanation of the pathology of this remarkable affection.

Dr. Macalister's views on pyrexia and heat-production are referred to, and the value of Dr. Collie's practical studies of typhus and typhoid fever and small-pox are fully recognised.

The advocacy of a specific treatment of scarlet fever by the administration of biniodide of mercury, as advocated by Dr. Illingworth and Professor Crookshank's researches into the nature of the 'true Jennerian cow-pox,' are mentioned.

We miss, however, any notice of Oertel's views on the treatment of diphtheria, and the discussion of the therapeutics of this affection is scarcely up to the level of the day.

In referring to Pasteur's method of preventive treatment of rabies, Dr. Roberts expresses his belief in its 'general efficiency.'

The usefulness of the salicylates in the treatment of acute rheumatism is scarcely sufficiently recognised, and their value is somewhat reluctantly admitted.

In discussing the treatment of phthisis the value of antiseptic measures is fully admitted, but no mention is made of the inhalation of the diluted vapours of hydrofluoric acid, so strongly advocated by Professor Hérard, the president of the French Academy of Medicine.

The local management of empyemas is scarcely discussed at all, and we cannot agree with the author that this important medical subject should be wholly relegated to the surgeons.

In discussing the treatment of cardiac affections, the value of strophanthus as a cardiac tonic is acknowledged.

Diseases of the nervous system claim an increased share of attention, and the author has had the advantage in this part of the work of the co-operation of Dr. C. E. Beevor, who, besides revising these chapters, has contributed the article on 'Multiple Neuritis'; and for the observations on the 'Uses of Electricity,' the author acknowledges his obligations to his colleague, Dr. Vivian Poore.

The needs of the student are especially considered in this as in former editions of Dr. Robert's valuable handbook, and its popularity as a textbook will no doubt be fully maintained.

ARTICLE 910.

The Intestinal Diseases of Infancy and Childhood. By A. JACOBI, M.D. Detroit: George S. Davis. 1887.

OF physicians whose names are associated especially with the diseases of childhood, there are none held in higher esteem than Professor Jacobi, of New York. His writings are voluminous, but they none the less bear the marks of deep erudition, keen powers of observation, sound judgment, and long experience. The present work is no exception to the rule, and the statements made in it may be taken as representing all that is stable of the most advanced views. The first part of the book deals with the food of the infant, and includes the variations of human milk, the diet of wet nurses, the milk of the cow, mare, ass, and goat. Here we interrupt the list in order to point out a passage which we think requires modification. The writer says, and, as a general rule, he is right, that the mixed milk of a whole dairy is preferable to the milk of one cow, because one or more of a herd may be tuberculous or otherwise diseased, and, therefore, by using the mixed milk the danger is minimised by the dilution that takes place; but surely there would be less risk still if the milk were drawn from one specially healthy cow, since a single diseased animal would vitiate the whole mixed supply. As, however, the question of infection in this way is still *sub judice*, the point is not of great present importance, and, as far as regards the digestibility and uniformity of the milk, the mixed supply is undoubtedly the best. Next, the whole question of so modifying cows' and other milks, as to assimilate them to the human secretion, is discussed. In speaking of the admixture of gum and gelatine, he points out that it is only under the influence of hydrochloric acid that these become nutritious, and that as this is absent from the gastric juice in acute and debilitating diseases, it must then be furnished artificially. The second part of the book treats of digestion, and of the different diseases and conditions of the whole alimentary canal. Although it is invidious to discriminate where the standard of excellence is so high in all, yet we venture to say that the therapeutic portion is that from which most may be learnt. We can only finish by cordially welcoming this addition to our literature.

RALPH W. LEFTWICH, M.D.

ARTICLE 911.

The Germ Theory of Disease. By FRANCIS W. CLARK, L.R.C.P.Lond., M.R.C.S. Pp. 22. London: Churchill.

THE aims of the author in publishing this cursory sketch of the present aspect of bacteriology in its relation to disease is not stated. Several important diseases are mentioned, and the chief facts known about the bacteria associated with them are succinctly given. But the information is scanty, and by no means up to date. Leprosy has one sentence, and though preventive inoculations are mentioned, the author is severely silent on hydrophobia. The Hendon outbreak is alluded to, but only one side of the case is stated. Regarding preventive vaccinations, we are told that the theory 'that seems perhaps the most feasible is that there is a sort of educational influence exerted upon the tissue-cells, so that they are taught, so to speak, how best to combat the injurious influences of the specific parasites.' The tolerance of arsenic by arsenic eaters is cited as being 'strikingly similar' to the protection afforded against certain diseases by previous inoculations.

ARTICLE 912.

A Second Clinical Study of Hemianopsia. By E. C. SEGUIN, M.D. Reprinted from the *Journal of Nervous and Mental Diseases*, Vol. xiv., November–December 1887. Pp. 19. New York. 1887.

THREE cases are described of hemianopsia 'of the peripheral or neural form, probably caused by a lesion of the chiasm,' and they are interesting as presenting 'the remarkable pupillary light reaction, first indicated by Von Graefe, and designated by Wernicke as "hemiopic pupillary reaction!"' Dr. Seguin proposes to replace this by the term 'hemiopic pupillary inaction.' One half of each retina being physiologically inert, or anæsthetic, fails to receive any impulse from the light which is thrown on it. The mode of examination is described. Appended are a series of conclusions on the different kinds of hemianopsia intended to assist in the differential diagnosis of peripheral and intracranial disease. E. J. EDWARDES, M.D.

ARTICLE 913.

On the Connection between the Formation of the Cranium and Myopia. By J. STILLING. Bergmann. Schädelbau und Kurzsichtigkeit. 1888.

IN this little book Stilling gives additional facts in support of his theory that the essential cause of the elongation of the eye in myopia is the pressure exerted by the reflected tendon of the superior oblique. This theory was propounded in the *Bericht der Oph. Gesellschaft* for 1886, and we commented on it in the MEDICAL RECORD of March 1887. In that paper the author contented himself with pointing out that the position and direction of the tendon, and the pressure it exercised, varied greatly, and that in highly myopic eyes it usually had a direction approximating the transverse and exercised a considerable lateral pressure on the globe. In this work the writer endeavours to show that the chief cause of this direction is the form of the orbit, and that this must therefore be looked upon as the ultimate cause of the myopia.

Whatever may be thought of Professor Stilling's

conclusions, there can be no question that he arranges his facts with great clearness, and argues from them with moderation and fairness.

The circumstance to which most importance is attached is the distance of the pulley of the superior oblique from the lower orbital margin. The trochlea lies a little lower than the highest point of the upper margin of the orbit, but usually at a constant distance from it; so that the higher the orbit the higher the trochlea. If, therefore, myopia is really caused by the pressure of the superior oblique we should expect to find the orbit proportionally small in the vertical diameter. Stilling claims that his results point to this conclusion.

The height and breadth of the orbits were measured by means of a pair of compasses whose extremities were furnished with small quadrilateral plates which could easily be introduced within the orbital margin. Of course the thickness of the soft parts varied slightly, but the error from this source was probably unimportant.

As the object was to show that it was the pressure upon the eye in near vision that caused its elongation, the first cases selected were adults who had used the eyes considerably for near vision; such myopes only were included as were able to state that their myopia came on during the period of growth and afterwards remained stationary. When possible the radius of the cornea was measured, in order to ascertain how much of the myopia was really due to elongation of the globe. The result of these observations was that the 'height-index' of the orbit (found by dividing the height by the breadth and multiplying by 100) was considerably lower in myopia than in emmetropia and hypermetropia. It is pointed out that this is in spite of the fact that among the orbits of myopic form are included many cases in which the eye is not myopic, because the long radius of the cornea has neutralised the axial myopia. The results are rather striking; for instance, taking 260 adults, who have been subjected to near work, the average height-index among the myopes was 77·8; among the emmetropes and hypermetropes, 89·1.

Exceptions were met with. For instance, in some cases of axial myopia the orbits had the hypermetropic form; in the majority of these it was found that the trochlea was further from the summit of the orbit than usual, and that if the distance between these points were reduced to the normal the form of the orbit would have been myopic. A similar explanation is said to apply to most of the exceptional cases of hypermetropia with myopic orbits.

The position of the globe in the orbit is also to be taken into consideration; the more prominent the globe the more transverse pressure will be exerted by the superior oblique.

The second chapter is devoted to a consideration of the relation between myopia and the form of the skull. If the author's previous conclusions be accepted, this relation may be looked upon almost as a corollary, for, although exceptions occur, it cannot be denied that the outline of the orbit depends to some extent on that of the face. The author's general conclusion is that the wide face predisposes to myopia, and the narrow to hypermetropia.

A chapter is devoted to the influence of peculiarities of race in the causation of myopia, but our knowledge here is too limited for reliable conclusions to be drawn.

If Stilling's conclusions are accepted, it is evident that the views which have been pretty generally held as to the nature of myopia must be considerably modified. The process leading to elongation of the globe, and to the formation of a crescent at the outer side of the disc, has usually been considered to be inflammatory, and the prognosis has been considered to be grave, since it was almost impossible in a given case to say when this inflammatory process would cease. Stilling, however, denies that inflammation plays any part in the production of myopia, and considers that the latter is the result of purely mechanical causes—growth under the influence of pressure. The myopic crescent he considers to be due, not to atrophy of the choroid, but to drawing back of the scleral canal and to the lateral displacement of the disc. A figure illustrating this will be found in Landolt, *Refraction and Accommodation* (Culver's translation, p. 427). According to this view, only such individuals will develop myopia from over-use of the eyes in near vision as are already predisposed to it by the formation of the orbit, and the myopia will continue to increase only during the growth of the eye.

The author of course admits that there is a form of myopia which is due to a morbid process. In such cases the crescent is not confined to the outer side of the disc, but encircles it. He states that he has frequently seen this malignant myopia when the orbits have been of the hypmetropic shape.

W. Adams Frost.

Article 914.

Nerve Prostration and Other Functional Disorders of Daily Life. By Robson Roose, M.D.

Dr. Roose has availed himself of the latitude afforded by his definition of the term 'functional' as applied to disease, and has included in this volume his opinions on nearly all the ills which depend on an unnatural or irregular action of a part, unconnected with any apparent injury to its structure. It is, however, a little startling to find discussed under the same category neurasthenia, hysteria, angina pectoris, and diarrhœa, and one can only wonder that Dr. Roose has not had the courage of his opinions and added chapters on diabetes, hydrophobia, and Graves' and other diseases. But whatever be the principle on which the book is written, the author has always pleasantly and more or less thoroughly discussed a large number of widely differing diseases.

The style of the book is too popular; parts, indeed, especially those dealing with the Nervous System, are almost fit for popular lectures. This alone would render it of little value as a text-book, for which, moreover, it is unfitted by the inadequate and sometimes loose discussion of modern scientific views; such statements as 'the absence of free hydrochloric acid in the stomach indicates cancer' ought not to be made without qualification.

The best part of the book, and that into which the author has put most of himself, is that devoted to 'Treatment.' One feels that one is learning from a man of experience who has had to treat disease, not only in hospitals, but at the homes of patients, and this section alone would justify the appearance of the book.

It contains little new or original, but it is eminently readable, and the hints on treatment are likely to be of much use to busy practitioners.

ARTICLE 915.

Diseases of the Skin, their Description, Pathology, Diagnosis, and Treatment. By H. RADCLIFFE CROCKER, M.D. With Seventy-six Illustrations. London: H. K. Lewis. 1888.

DR. CROCKER states in his preface that in this very handsome volume, which does great credit to his publishers, it has been his aim to give a succinct account of our present knowledge of dermatology and, at the same time, to present the results of twelve years' experience in the Skin Department of University College Hospital, and in the more general work of the East London Hospital for Children. In this aim he has been most successful. The book, from beginning to end, bears evidence of a thorough careful and exhaustive study of all the recently published dermatological literature, both in Britain, the Continent of Europe, and America.

The information extracted from these voluminous and rapidly becoming impossibly voluminous resources is well digested, clearly put, and the proportions of the important and unimportant are well maintained. Dr. Crocker expresses the modest hope that his work will be found to possess truthfulness to nature and sufficient individuality to enable it to retain a place in the now rapidly growing literature of dermatology, and in this laudable wish we see no reason to believe he will be disappointed.

The field of this branch of medicine is undoubtedly becoming almost inconveniently occupied. The prolific nature of specialist literature is well recognised, and in no department of specialism has this fertility been recently more displayed than in dermatology. The intervals at which one text-book on skin-diseases has followed another have been inconveniently short. It would be unreasonable to expect practitioners, or even specialists, who are not at the same time bibliophiles, to purchase all these books. It is no empty compliment to Dr. Crocker to state that a good deal will be found in his book that has been more briefly considered in his more immediate predecessors, while a very great deal will be found in all these recent books of which no notice whatever could be taken in books published ten years ago. The work will take an honourable place among the best British and American manuals on the subject, and by its comprehensive and intelligent digest of foreign literature it occupies a prominent place amongst them all.

The work opens with eight engravings, showing the normal anatomy of the skin, five of which are accurate copies of the beautiful drawings that illustrate Ranvier's book on Histology, and will serve to remind those who have forgotten their histology and physiology of the leading features of the anatomy of the skin.

There are seventy-six illustrations in the book, well-executed woodcuts, nearly all of which are made from copies of drawings of Dr. Crocker's own preparations, and afford a pleasant testimony to the zeal with which the author has devoted himself to the study of the subject.

Dr. Crocker gives a concise though clear account of a disease which some years ago excited considerable interest for a short time—the curious affection named cheiropompholyx, by Hutchinson, and dysidrosis by Tilbury Fox, and to which he very properly gives the shorter title of pompholyx. Dr. Crocker considers that on clinical as well as on anatomical grounds the disease is intimately connected with the sweat apparatus; but he thinks, however, it may be of neurotic origin, of which theory, however, he offers no proof. The treatment he recommends is improved hygiene, and wrapping each finger separately in oleate of zinc or lead ointment. He states that the inflammation soon subsides, and healing follows; a happy result, the success of which we envy.

In the treatment of psoriasis Dr. Crocker, after discussing the action of the usual well-known remedies, recommends the use of turpentine. He uses it either undiluted, in which case the skin is afterwards smeared with vaseline to prevent too much desiccation, or diluted with olive-oil.

Pityriasis rosea is well described, the views of the French writers who have contributed most to our knowledge of this affection being clearly given. Dr. Crocker does not accept the microsporon anomœon of Vidal as the specific fungus of the disease.

Everyone who is in the habit of examining the naked skin of adult males must be familiar with the seborrhœal eczema so common about the sternum, but also found on the back and other parts of the trunk. The differences of opinion as to the most appropriate name for this affection has led to more discussion regarding it in medical literature than the importance of the affection merits. Dr. Crocker adopts the name *lichen circinatus*. As he truly remarks, the disease is most prominent in those who sweat freely and wash sparingly.

Dr. Crocker alludes to a curious case of lichen ruber shown at the Dermatological Society by Dr. Stephen Mackenzie, in which the eruption was in the course of the left ulnar and internal cutaneous nerves, and refers to another case of Dr. Mackenzie's in which the disease began in the course of the intercostal nerves, like a herpes, and subsequently, after a long interval, became general. Two excellent woodcuts from his own preparations illustrate the dermatological histology of lichen ruber. In one the papillary layer of the cutis is seen to be full of small-cell infiltration, the accompanying œdema having raised the epidermis so as to form a papilla. In the treatment of lichen ruber, Dr. Crocker prefers giving arsenic in the form of Fowler's solution to that of hypodermic injection.

The reader will find a reference to the curious cases described by Leloir under the title of 'Conglomerative folliculitis,' and refers to the only case known in England which resembles Leloir's case—namely, one shown by Dr. Stephen Mackenzie at the Dermatological Society. The disease is characterised by oval or roundish patches from half an inch to two inches in diameter, and raised from a line to a quarter of an inch. The surface is smooth, or slightly mammillated and cribriform, the orifices being filled at first with pus, but the hairs, if any, having generally fallen out. There are also numerous superficial pustules. The orifices enlarge to the size of a pin's head, and pus exudes on pressure. The affection is local, and disappears without leaving a scar.

Under the heading *Dermatitis Medicamentosa* there is an excellent description of the eruptions to which various drugs give rise, which is concluded by a useful summary. Twenty-two produce erythema, two excite urticaria, and three vesicular or bullous eruptions. The author remarks that the presumption is in favour of all these exanthematic rashes being due to a vaso-motor neurosis either from reflex irritation or direct action on the vaso-motor centres, and

finds corroboration of this theory in the fact that similar eruptions have never been known to follow subcutaneous injection of the drugs.

If time permitted we might refer to an excellent illustration of the histology of morphœa; to a transverse section of a hair follicle in an early stage of molluscum contagiosum; to an interesting description of a rare affection called xanthoma diabeticum; to some sensible remarks on the treatment of lupus erythematosus in which the author records his experience in the treatment of this obstinate affection by drugs, such as arsenic and iodide of starch, the result of which is very disappointing; to the statistics of tuberculosis of the skin by which we find that Chiari found the disease five times in 6,000 *post mortems* of which between 3,000 and 4,000 had died of tuberculosis and to excellent woodcuts of various abnormalities of the hairs. A chapter on formulæ finds its usual place as an appendix to the volume.

ARTICLE 916.

Lectures on the Treatment of the Common Diseases of the Skin. By ROBERT M. SIMON, M.D. Birmingham: Cornish Brothers. 1888.

DR. SIMON'S lectures contain nothing that is not to be found in the text-books and medical journals that are already in the hands of the profession and offer no points for comment. The small volume bears testimony to Dr. Simon's diligence as a student of dermatological literature, and of the interest he takes in the treatment of diseases of the skin.

NOTES ON BOOKS.

ARTICLE 917.

'*Quand et Comment doit on Prescrire la Digitale,*' by DR. HUCHARD, is another contribution to the study of this protean drug, digitalis—this time by a master hand. The physiological effects of the drug have been fairly well ascertained, but the scope of and indications for its employment in therapeutics are still far too uncertain and too unreliable. Clinically it is recognised to afford immense relief in a certain class of cases, and it is precisely the difficulty of circumscribing this category that throws discredit upon its use. The problem is one to be solved by clinical observation, and we may, therefore, pass over the chapters on the particular structures acted upon. They place in great relief the remarkable divergence of opinion which exists between authorities on this point, but they possess a scholastic rather than a practical interest. Coming to the question as to *when* digitalis should be ordered, the author declares it—unnecessary in cardiac lesions with due compensation; injurious in hypertrophy of the cardiac muscle (hypersystole); injurious in vasculo-cardiac lesions (sclerosis); useful in the period which succeeds hypersystole—viz., asystole. Even in the latter, a moment arrives when the heart-muscle no longer reacts to the stimulus, when dilatation of its cavities takes place, and when circulatory embarrassment is definitive and irremediable—once again, digitalis is useless.

In many cases the success or failure of the treatment will depend upon the circumstances under which the drug is administered, and the study of these conditions is all-important, though they cannot be discussed here.

We have already alluded to the fact that the use of digitalis must be determined on clinical grounds, hence, the mere presence of valvular disease *per se* affords no indication whatever of its desirability. For this we must consider the condition of the cardiac muscle; a condition of asystole is *the* indication for digitalis, although it is not necessarily of service in all cases of asystole. In other words, when the failure is of a temporary nature, when the cardiac muscle and the vessels are asthenic—when œdema, visceral congestions, and dropsy begin to show, then is the moment to prescribe digitalis with confidence. Earlier or later, it is either useless or dangerous.

It has often been said that he who could show us how and when to use digitalis would confer a much greater service than he who adds another to the already long list of cardiac medicines. This the author has conscientiously endeavoured to do. He has summarised and classed the news generally received, and has added the results of his personal study and observation. His essay, therefore, merits the serious attention of therapeutists and practitioners generally.

ARTICLE 918.

The Abortive Treatment of Specific Febrile Disorders by the Biniodide of Mercury, by C. R. ILLINGWORTH (H. K. Lewis, 1888), will serve to gratify a very legitimate and widespread desire for knowledge on this particular subject, which has been manifested during the last few years. The treatment is based on arguments which, though convincing, are by no means irrefutably established. Put to the test of experience, the results—in Dr. Illingworth's hands, at any rate—have been highly successful, and if equally so elsewhere may be taken to prove that his method is a valuable innovation. The idea of aborting specific diseases is sufficiently audacious to render men more than usually sceptical, but as at present no treatment beyond the expectant is available, there is no reason why it should not be tried.

ARTICLE 919.

THE reprint of Dr. Mattison's articles on *Cocaine Dosage and Cocaine Addiction* will be familiar to many of our readers, having been analysed by us last year. The author shows, what is now beginning to be a well-recognised fact, that cocaine is not a drug to be used recklessly. Some credit is due to him for having emphasised this fact at a time when the danger was far from generally understood.

ARTICLE 920.

A FIFTH EDITION of Martindale's *Extra Pharmacopœia* has been rendered necessary by the rapid progress of pharmaceutical and therapeutical progress since 1885. The editors are pleased to admit that although we have been flooded with a series of preparations, principally of American origin, which 'owe their popularity in a great measure to the force of advertisement,' a number of new remedies have, nevertheless, been introduced which are proving of great service. The list of these additions is surprising in its length, and if the value of drugs only

bear a reasonable relation to their multiplicity, the practitioner must be armed to the teeth in his battle against disease. The present edition contains about fifty pages more matter than its predecessor, although twenty pages of the old matter have been deleted. It is satisfactory to note that the opinion is gaining ground 'that the art of pharmacy should tend towards making medicines palatable,' but of course, not at the expense of their efficacy. Coca, with its preparations and derivatives, is very fully dealt with, extending over nearly twenty pages. The coal-tar derivatives are grouped together, and are, on the whole, summarily treated. The qualities which have ensured the work a large share of popularity in the past will doubtless have the same effect in the future.

Alfred S. Gubb.

DIETETIC NOVELTIES.

ROWNTREE'S ELECT EXTRACT OF COCOA.

We have received samples of the preparation of cocoa manufactured by Messrs. Rowntree & Co., of York, which is one of the best preparations of the cocoa-bean ever brought under our notice. The cocoa is sent out in the form of a packet enclosed in prepared paper, and then put into air-tight tin cases. The principal points of excellence of the Elect Extract of Cocoa are its purity and delicate flavour, as it is altogether free from the acrid taste often met with in cocoa essences and extracts. Whilst very suitable for dyspeptic patients, its remarkable fulness of flavour will recommend it to all cocoa drinkers. It is also more soluble than the majority of cocoa extracts. As a proof of this assertion, if a few spoonfuls taken from a cup of this extract, when mixed for use, are placed in a test tube, and the same process is adopted with any ordinary extract of cocoa, and their powers of suspension be compared, the greater solubility of the Elect Extract will at once be recognised. As regards its strength it will be generally found that half a teaspoonful is sufficient to make a breakfast cup.

HENDERSON'S PRIZE MEDAL SCOTCH OATMEAL BREAD.

Although comparatively little progress has been made in the southern part of the kingdom with oatmeal as a bread food, it is generally known that oatmeal cakes form no inconsiderable portion of the bread-stuff diet in the Northern counties and in Scotland; but an oatmeal loaf, such as those now manufactured by Messrs. Henderson & Son, of West Hill, Wandsworth, has never been attempted on such an elaborate and scientific scale. No maker of bread has attempted to overcome the technical difficulties of producing a thoroughly good oatmeal loaf until the firm in question took the matter in hand. Henderson's oatmeal bread is somewhat of the appearance of ordinary brown bread, though not so dark in colour as some, and it has the remarkable feature of keeping moist and fresh for several days. This can be vouched for by the writer of this notice; and in fact, the makers assert that Henderson's Oatmeal Bread will keep in perfect condition, even when cut, for eight days. It is sweet, moist in eating, and altogether very delightful bread. While admirably adapted for dyspeptics, it will be no less appreciated by the robust. When generally known, we believe it to be more than probable that the profession will largely recommend its use to their dyspeptic patients.

MISCELLANY.

Dr. E. W. Alexander, of Dunedin, in a pamphlet on 'Insanity in New Zealand,' states that the proportion of the insane to the population of New Zealand (1 in 320) is much about that of other civilised countries. Of 1,613 inmates of New Zealand asylums 1,302 came from the United Kingdom, and about 150 from the Continent and America, and 111 only were New Zealand born. The Maoris contribute 21 for a population of 50,000, illustrating the far less frequency of brain disturbance in a savage race.

Recently a resident of Gainsborough, Lincolnshire, while eating some mussels which had been purchased from a local fishmonger, discovered in the shell of one of the fish a seal from a gentleman's Albert guard, and to which was still attached three links. The seal is round and smooth, and the stone, which is a red one, appears to be a valuable one. It is broken across the centre, but whether this has been done before or after the time it has been within the shell cannot be discovered. The silver of the links is of a good quality, and, by the design, must have been of an old manufacture.

A Doctor-forgotten Land.—The first University of Siberia, at Tomsk, has just been opened, and will for the present begin with only one faculty, that of medicine. How urgently necessary the establishment of this Siberian faculty of medicine has become may be seen in the following figures:—The practice of one doctor is supposed to extend over each of the following districts, with their respective populations: Tobolsk, 129,785 square versts, 110,323 inhabitants; Akmolinsk, 87,833 square versts, 80,062 inhabitants; Semipalatinsk, 85,705 square versts, 100,225 inhabitants. In short, there are only twenty-two doctors over an enormous territory of 2,815,547 square versts.

The Switchback Railway.—In the *Lancet*, July 1888, p. 193, Dr. Cullimore writes that the practice of swinging, or riding on the switchback railway, or tobogganing, are pleasures which might prove very useful in removing biliousness. The author recommends these exercises to the languid, melancholy, bilious, and appetiteless millions of London who are unable to go away at this time of the year. Swinging increases the respiratory activity, directs the blood to the surface, and dissipates internal congestion. The effect of the switchback is similar, but more exhilarating; on mounting there is a sense of suppressed nervous excitement, followed by prolonged inspirations, great exhilaration, and a glow to the skin, thus bringing about strong stimulating effects to the liver, helping on its clogged secretions. One ride on the switchback is not enough; it should be repeated six or a dozen times.

Paddling.—In the *British Medical Journal*, July 1888, p. 124, Mr. Raven draws attention to the dangers of the amusement called 'paddling.' During the summer months at the seaside hundreds of children can be seen with their clothes tucked up to their hips, immersed almost to their waists in cold water, with a hot sun beating on their heads. A common result is a condition resembling heatstroke; even if this serious affection be not brought about, numbers of children are restless at night, languid all day, and complain of headache or general *malaise*; this is often put down to the strong air, or to derangement of the liver by the parents of the child, and nothing is done to give relief. In severe cases the author adopts a plan of treatment which he calls 'paddling at the

other end,' *i.e.* he applies hot mustard and water to the extremities whilst the head is douched with iced water, and gives a brisk purge to relieve the congested internal organs. If 'paddling' must be allowed, a degree of safety is insured by making the child leave the water frequently and run about on the shore. The limbs thus become warm again, and the danger to the head is removed at the expense of the skin, which is apt to become inflamed and blistered by the sun.

A QUESTION of French has been decided by the Academy of Medicine. A short time since the French Premier requested the Academy to exactly define the pharmaceutical terms 'officinal' and 'magistral,' the distinction being of some importance for administrative reasons. The Academy appointed on the question a committee composed of MM. Planchon, Lefort, Bourgoin, Dujardin-Beaumetz, and Prunier, and the committee presented a unanimous report, which will be adopted by the Academy, and consequently by the Administration. The definition settles a question hitherto very puzzling to foreign readers of French therapeutical and pharmaceutical literature. According to the academical committee, 'officinal' medicaments are those whose formulas and mode of preparation are given by the Codex, and which, besides, will keep a long time without noticeable alteration. The 'magistral' are such medicines as the pharmacist prepares when prescribed, and dispenses immediately, without regard to their keeping properties. Such, it may be remarked, is the usually accepted meaning of the terms in general. But, to be more precise, the committee added:—'1. Such medicaments only should be considered "officinal" which keep easily, and whose formula and mode of preparation are mentioned in the Codex, if they are galenical, or whose characters and method of purification and testing are given, if chemical. 2. It does not follow, nevertheless, that all medicaments mentioned in the Codex are necessarily officinal. Potions, ptisanes, juleps, &c., are by nature essentially "magistral," like all mixtures prescribed by the physician, even when exclusively composed of officinal medicaments. The fact alone of the mixing causes them to become magistral remedies.' It is scarcely necessary to point out the different meaning of the word 'officinal' in the two languages. In English it is applied to pharmacopœal drugs and medicines; in French it is derived from the word 'officine,' drug store, and means medicines kept in stock.

ACCORDING to *Nature* a new base has been discovered in tea by Dr. Kossel, of Berlin. It appears to be an isomer of theobromine, the well-known base present in cocoa-beans, possessing the same empirical formula—$C_7H_8N_4O_2$, but differing very materially in physical and certain chemical properties. The new base, to which has been assigned the name 'theophylline,' was discovered during the investigation of large quantities of tea-extract, which, after treatment with sulphuric acid to remove foreign matters, was saturated with ammonia-gas and precipitated with ammoniacal silver solution. The silver precipitate was then digested with warm nitric acid, and, on cooling, the silver salt which separated out was filtered off and the filtrate rendered slightly alkaline with ammonia. On allowing this alkaline liquid to stand until the next day, a brownish deposit was noticed, which, on examination, proved to be the silver compound of a new base. The solution was therefore further concentrated, and a second and much larger yield of the silver salt obtained. This was next decomposed by sulphuretted hydrogen, the free base being thus obtained in solution. The liquid, after removal of the silver sulphide by filtration, deposited on standing a small quantity of xanthine, $C_5H_4N_4O_2$, a derivative of uric acid, whose presence in tea has previously been shown. The mother-liquors were afterwards treated with mercuric nitrate solution, which precipitated the theophylline in the form of a mercury compound, from which the base itself could readily be obtained by treatment with sulphuretted hydrogen as before. Analyses of the theophylline obtained after purification indicate the formula $C_7H_8N_4O_2$, which is that of theobromine. But the two substances are certainly not identical; their crystals are quite distinct, those of theophylline containing one molecule of crystal water, which is expelled at 110°, while theobromine crystallises anhydrous. The crystals also are totally unlike those of the other known isomer of theobromine, paraxanthine, from which theophylline differs most materially in its behaviour with soda. Again, the melting points of the three isomers are considerably removed from each other, and their different solubilities in water are conclusive proofs of their different internal structures. Theophylline forms a well-crystallised series of salts with the mineral acids, and with platinum, gold, and mercury chlorides; and, like theobromine, yields with silver nitrate a silver substitution compound, $C_7H_7AgN_4O_2$, which, as may be concluded from the above method of isolation, is readily soluble in nitric acid. Finally, to complete the proof of its isomerism with theobromine, which is the dimethyl derivative of xanthine, the silver compound was found to react with methyl iodide to form tri-methyl xanthine, better known as caffeine or theine, the remarkable base of the coffee and tea plants.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.—The Quarterly Examinations in Edinburgh for the Triple Qualification took place in July with the following results:—*First Examination.*—Of forty-nine candidates, the following thirty-five passed:—Philip Dansey Addis, Bristol; Clifton Sturt, London; Joseph Welsh, Newtownbutler; Henry Taaffe, Londonderry; John Cuthbertson Walker, Helensburgh; William Daunt, Dublin; Robert Phillip Cooke, County Roscommon; Wilfred Jameson, Carlow; Edward McCarthy, Kinsale; Daniel John O'Mahony, Cork; George Bridgeford Proctor, Birkenhead; Francis Weatherdon Toms, London; John Timothy Buckley, County Kerry: Alfred Jackson, County Cork; Thomas William Clay, Anglesea; Penry Foster James, Glamorganshire; Arthur Thomas Kember, India; Horace Allonby Smit, Cape Colony; Charles Howard Roberts, Cape Colony; Frederick John Bonnalie, Chester; Thomas William Edward Waddington, Blackburn; Samuel Haldane Heald, Wakefield; Angus John Macdonald, South Australia; John Joseph Brennan, Kilkenny; Andrew Lees Smith, Hamilton; Thomas Joseph Frost, County Clare; Lionel Selfe Wells, Australia; John Cumming, Banffshire; Philip Graham Findlay, Nairn; John Warburton Wilkinson, Queen's County; Thomas Peter Wells, Blackburn; Maurice Joseph Hickie, Castletownroche; Edward Hughes, Wales; John Francis Butler-Hogan, Dunmanway; and David Samuel Browne, Mullaglass.

Second Examination.—Of 59 candidates, the following 33 passed:—Nathaniel Henry Runciman, Cork; John Dunne, county Cork; Edmond William St. Vincent Ryan, Cork; John Francis Roden, Edinburgh; Richard Patrick Byrne, Cork; Gordon Trafforde Tuke, Edinburgh; Simon Ryan, Armagh; Clifton Sturt, London; Albert Edward Wynne, Stafford; Joshua Hamilton Hart, Yorkshire; Robert Love, county Antrim; Miss Beatrice Mary Harrison, Brighton; James Downie Watt, Leamington Spa; Vernon Francis Allen, county Cork; Philip Dansey Addis, Bristol; Richard FitzGerald, county Cork; Paul Madden Sheedy, county Cork; William Brough Arthur, Dundee; Frederick Charles Foster, Canterbury, New Zealand; Ernest Victor Eames, Donegal; David Illtyd Jones, South Wales; Arthur Edmund Shepherd, Adelaide; Alexander Vincent Bowen, Preston; James Henry Syme Grant, Dunfermline; Albert Edward William Burns, Chatham; Frederick Albert Capps, Portsmouth; William Johnson Langley, county Waterford; Patrick Francis O'Hagan, Longford; John Francis Butler-Hogan, Dunmanway; Jeremiah Barry, Castletownroche; William Cornelius Rainsbury, Queenstown; John Robert Mason, Lancashire; and Percy Stainsby, Yorkshire.

Final Examination.—Of 60 candidates, the following 30 passed, and were admitted L.R.C.P.E., L.R.C.S.E., and L.F.P. & S.G. :—Thomas McCubbin, Kirkintilloch; David Scott Moncrieff, Edinburgh; Gilbert Gordon, Ontario; Joseph Adam Nolan, Kilkenny; Thomas Everard, India; Richard Griffith, Carnarvon; John Richard Haigh Dyson, Honley; William Wendt Margenout, Colombo, Ceylon; Charles Barrie Taylor, Manchester; Miss Lilian Agnes Hester Jenkins, Tenby; Rupert Wilberforce Clayton, Wrexham; Lucien Milbourne Clark, Kingston, Jamaica; Nathaniel Henry Runciman, Cork; Robert Trimble, Strabane; William Dwyer Russell, County Tipperary; Thomas Sprot Allan, Glasgow; Alexander Lang Murray, Belfast; Newton John Newbould, Toft; Charles Albert Wickham, County Longford; John Henry Briggs, Yorkshire; Charles Edward Lownds, Newcastle-on-Tyne;] Charles Pearce, Santiago, Chili; Andrew Davidson, Bangor, County Down; Alfred Dorriforth Vardon, Calcutta; Marius François Xavier Nallétamby, Mauritius; Edward Treharne, Glamorganshire; Harry Evelyn Mahonie, Sheffield; William Keiller, Midlothian; William Joseph Ryan, Limerick; and Walter Halliburton Macdonald, Inverness-shire.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.

Questions set at the Examinations in June and July.

TRIPLE QUALIFICATION.

Questions in Chemistry.

Four questions, all of which are to be answered.

I. Give the co-efficient of the expansion of gases by heat. What do you understand by 'latent heat'?

II. Name the chief ore of mercury, and give its composition. How is the metal extracted from it?

III. What compounds are formed when a cold solution of caustic potash is saturated with iodine? Give their formulæ, and also the equation.

IV. From what source is crude methyl alcohol obtained on the manufacturing scale. Briefly describe the process. What is the formula of the pure alcohol?

Questions in Elementary Anatomy.

All of which are to be answered.

I. Give a concise account of the peroneal artery, its relations and branches.

II. Mention the differences by which the 1st, 11th, and 12th ribs can be distinguished from each other.

III. Describe the external cuneiform bone of the foot.

IV. Give the course, relations, and distribution of the radial nerve.

Questions in Physiology.

All of which are to be answered.

I. Describe the different forms of peripheral nerve termination.

II. Give an account of the manner in which effete blood-corpuscles are removed from the circulation, and state how new red corpuscles are formed.

III. Describe the contraction produced in a nerve-muscle preparation by a single electric shock of medium strength, and describe the condition known as 'physiological tetanus,' and state how it may be produced.

IV. What do you understand by *spherical* aberration and *chromatic* aberration, and explain the arrangements in the eye for their correction?

Questions in Materia Medica.

Three questions, all of which are to be answered.

I. Mention the three officinal hypodermic injections, their strength and dose.

II. State the composition of the enemas of turpentine, opium, and assafœtida.

III. Describe the method of preparation, the strength, and the dose of the liquors of hydrochlorate of morphia, hydrochlorate of strychnia, and sulphate of atropia.

Questions in Advanced Anatomy,

All of which are to be answered.

I. Describe the dissection necessary to expose the right common carotid artery in its whole extent, and give the relations of that artery.

II. State what is the normal position of the spleen, and give its connections and relations.

III. Name all the branches of the pneumogastric nerve, and trace the distribution of those given off in the neck.

IV. Give the origin, insertion, relations, and actions of the sterno-cleido-mastoid muscle.

Questions in Medicine,

Three only of which are to be answered.

1. Give the signs which are diagnostic of well-marked mitral stenosis. Mention the organs which are necessarily affected by this lesion, and describe its immediate and remote effects on these organs.

II. What is coma? Mention four diseases in which coma occurs as an important symptom or complication, and explain shortly how it is believed to be produced in each.

III. Give the varieties, morbid anatomy, diagnosis, and treatment of lupus.

IV. What is the pathology of cirrhosis of the liver? State the facts on which you would base a diagnosis of the disease in the first stage, and give the treatment you would employ to arrest it

Questions in Midwifery and Gynæcology.

Three questions must be answered, of which the last must be one.

I. Describe a case of hydatiform degeneration of the chorion, the causes, pathology, and treatment.

II. Pelvic-brim diameters. Describe diameter conjugata vera, diameter conjugata diagonalis, diameter transversa, diameter diagonalis dextra, diameter diagonalis læva—stating the average length of each in the adult female normal pelvis.

III. Breech presentations—their causes, diagnosis, and management.

IV. Name the varieties of uterine polypi, the symptoms they cause, and describe the treatment for their removal.

Questions in Medical Jurisprudence and Hygiene.

Four Questions, of which Three are to be answered, and in these 3 and 4 must be included.

I. What are the symptoms of acute arsenical poisoning, and the appearances which may be presented in the stomach and bowels after death? How would you proceed to detect arsenic in the liver?

II. What are the signs in a living woman of recent delivery (within a week) at the full time?

III. What are the symptoms presented in poisoning with carbonic acid gas, and the appearances after death? What circumstances might enable you to say the death was accidental or suicidal? How could you clear a well of this gas? How does carbonic oxide act on the blood?

IV. What is meant by the terms natural and artificial ventilation? Upon what forces does ventilation depend? Give the composition of atmospheric air when pure, and mention the proportion of carbonic acid gas which when present in the atmosphere of a room renders it unpleasant. How is carbonic acid gas detected in air?

Questions in Surgery,

All of which are to be answered.

I. Bed Sores—(1) In what situations are they apt to occur? (2) Give the causes. (3) Mention the treatment, preventive, and curative.

II. Mention the chief sources of danger in the administration of chloroform. If death be threatened, what treatment would you adopt?

III. Strumous arthritis of the knee—(1) Give the symptoms in the stage before suppuration. (2) If the joint were then laid open, what pathological changes would you find? (3) What treatment would you adopt in this stage?

IV. Senile hypertrophy of the prostate—(1) What alterations does it produce in the prostatic urethra? (2) What symptoms does it occasion? (3) Describe the methods by which you attempt catheterisation for retention in such cases.

Questions in Surgical Anatomy.

One of which only is to be answered.

I. Give the anatomy of the parts concerned in the operation of œsophagotomy—(1) Structures cut through, (2) those on each side of the wound.

II. Give the anatomy of the veins of the leg which are most prone to become varicose.

Questions in Therapeutics.

All of which are to be answered, including the Prescription.

I. Mention some of the therapeutic agents most useful in the treatment of Valvular Disease of the Heart, and how they are supposed to influence the diseased condition.

II. Explain the physiological action of Alkalies when taken internally, and how small doses are of service in Atonic Dyspepsia.

III. Mention some of the therapeutic uses of Sulphate of Copper when administered internally.

PRESCRIPTION.

To be written in unabbreviated Latin, the directions in English.

Prescribe Salicylate of Soda for a case of acute Rheumatism.

The London Medical Recorder.

GREAT BRITAIN AND IRELAND.

MEDICAL QUALIFICATIONS.

THE number of examining bodies in the United Kingdom which grant degrees and diplomas is twenty. The qualifications obtainable from them are as follows :—

1. *Royal College of Physicians of London :* Diplomas of Licentiate, Member, and Fellow.
2. *Royal College of Surgeons of England :* Diplomas of Member and Fellow.
3. *Apothecaries' Society of London :* Licence.
4. *University of Oxford :* Degrees of Bachelor of Medicine and Doctor of Medicine, and Bachelor of Surgery and Master in Surgery.
5. *University of Cambridge :* Degrees of Bachelor of Medicine and Doctor of Medicine, and Bachelor of Surgery and Master in Surgery.
6. *University of London :* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master in Surgery.
7. *University of Durham :* Licences in Medicine and in Surgery ; Degrees of Bachelor in Medicine, and Doctor in Medicine, Bachelor in Surgery, and Master in Surgery.
8. *Victoria University :* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master of Surgery.
9. *Royal College of Physicians of Edinburgh :* Diplomas of Licentiate, Member, and Fellow.
10. *Royal College of Surgeons of Edinburgh :* Diplomas of Licentiate and Fellow.
11. *Faculty of Physicians and Surgeons of Glasgow :* Diplomas of Licentiate and Fellow.
12. *University of Aberdeen :* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.
13. *University of Edinburgh :* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.
14. *University of Glasgow :* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.
15. *University of St. Andrews :* Degrees of Bachelor of Medicine and Master in Surgery, and Doctor of Medicine.
16. *King and Queen's College of Physicians in Ireland :* Diplomas of Licentiate, Member, and Fellow, and Licentiate in Midwifery.
17. *Royal College of Surgeons of Ireland :* Diplomas of Licentiate and Fellow ; and Diploma in Midwifery.
18. *Apothecaries' Hall of Ireland :* Licence.
19. *University of Dublin :* Licences in Medicine and in Surgery ; Degrees of Bachelor in Medicine, Doctor in Medicine, Bachelor in Surgery, and Master in Surgery, Bachelor in Obstetric Science and Master in Obstetric Science.
20. *Royal University in Ireland :* Degrees of Bachelor of Medicine, Doctor of Medicine, Bachelor in Surgery, Master in Surgery, Bachelor of Obstetrics, and Master of Obstetrics.

The Royal College of Physicians of London and the Royal College of Surgeons of England have instituted a conjoint examination for the conferring of the Licence of the former and the Membership of the latter body.

The Apothecaries' Society of London now confers a licence which constitutes a complete medical and surgical qualification.

The Royal Colleges of Physicians and Surgeons in Edinburgh, and the Faculty of Physicians and Surgeons in Glasgow, have also instituted a conjoint examination for the conferring of licences.

The King and Queen's College of Physicians in Ireland, and the Royal College of Surgeons of Ireland, have also instituted a conjoint examination.

The Apothecaries' Hall, Dublin, has also instituted a conjoint examination with the Royal College of Surgeons of Ireland.

The Royal Colleges of Surgeons and the Faculty of Physicians and Surgeons of Glasgow grant licences in Dental Surgery, which are registrable under the Dentists' Act.

Certificates and diplomas in State Medicine and Public Health (which are registrable under the Medical Act of 1886) are conferred after examination by the Universities of Oxford, Cambridge, London, Durham, Edinburgh, Glasgow, Aberdeen, and Dublin ; by the Royal University of Ireland ; by the Royal Colleges of Physicians in London and Edinburgh ; by the Faculty of Physicians and Surgeons of Glasgow ; and by the King and Queen's College of Physicians in Ireland.

The Royal University of Ireland confers a special diploma in mental science.

A special certificate in Psychological Medicine is also given by the Psychological Association.

The following is a general summary of the conditions required on the part of candidates for examination ; but, for further details, our readers must consult the regulations issued in the Student's numbers of our medical contemporaries ; or apply to the officers of the respective Universities, Colleges, and Halls.

The regulations of the Examining Bodies are, with very few exceptions, framed in accordance with the Resolutions and Recommendations of the General Medical Council.

Every medical student is required to be registered at the office of the General Medical Council ; prior to which he must have passed an examination in subjects of general education. As evidence of this are recognised :—1. The possession of a degree in Arts of a University of the United Kingdom or of the Colonies, or of some University recognised by the Medical Council ; 2. A certificate of having passed an examination in subjects of general education conducted by some one or other of the educational bodies, a list of which is given with the 'Recommendations of the General Medical Council.' No person is allowed to be registered as a medical student unless he shall have previously passed (at one or more examinations) a preliminary examination in the following subjects of general education : 1. English Language, including Grammar and Composition ; 2. Latin, including Grammar, Translation from specified authors, and Translations of easy passages not taken from such authors ; 3. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions ; (*b*) Algebra, including Simple Equa-

tions; (*c*) Geometry, including the first book of Euclid, with easy questions on the subject-matter of the same; 4. Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics; 5. One of the following optional subjects: (*a*) Greek; (*b*) French; (*c*) German; (*d*) Italian; (*e*) Any other modern language; (*f*) Logic; (*g*) Botany; (*h*) Zoology; (*i*) Elementary Chemistry. The preliminary examination having been passed, the student should at once register, as the commencement of the course of professional study is not recognised as dating fifteen days earlier than the date of registration. Forms for registration are supplied by the licensing bodies and at the schools and hospitals. Every person desirous of being registered as a medical student must apply to the branch registrar of the division of the United Kingdom in which he is residing; and must produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and *evidence that he has commenced medical study*.

After passing the preliminary examination, the student may commence his medical education in one of the following ways (according to the regulations of the licensing body with which he intends to become connected): 1. By attendance for one year on the practice of a provincial hospital or other public institution recognised for this purpose; 2. As the pupil, for one year, of a legally qualified surgeon holding sufficient public appointments to afford such opportunities of practical instruction as shall be satisfactory to the authorities; 3. By entering at once at a recognised medical school.

The course of professional study must occupy four years, of which at least four winter and three summer sessions must be passed at a recognised medical school or schools. For the degrees of the Universities (except those of London and the Royal University in Ireland) the candidate is required to spend a portion of the time of medical study at the University which grants the degree, or at a college in connection therewith.

To obtain a degree, diploma, or licence, two examinations at least in professional subjects must be passed. These must include the following subjects: Chemistry (including the principles of the science and the details which bear on the study of Medicine, and the rudiments of Heat, Light, and Electricity); Anatomy; Physiology; Materia Medica and Pharmacy; Pathology; Medicine (including Medical Anatomy, Clinical Medicine, and Therapeutics); Surgery (including Surgical Anatomy and Clinical Surgery); Midwifery (including Diseases peculiar to Women and to New-born children); Theory and Practice of Vaccination; Forensic Medicine; Hygiene; and Mental Diseases.

Special arrangements exist at the University of Durham and St. Andrews for granting degrees to practitioners of medicine above forty years of age.

INSTRUCTION IN THE MEDICAL SCHOOLS.

THE medical schools in London are those of St. Bartholomew's, Charing Cross, St. George's, Guy's, the London, St. Mary's, Middlesex, St. Thomas's, and Westminster Hospitals; and the Medical Faculties of King's and University Colleges. To these may be added the London School of Medicine for Women, with which the Royal Free Hospital is connected for the purpose of clinical instruction, Mr. Thomas Cooke's School of Anatomy and Surgery, and the West London Hospital Preparatory School of Medicine.

In the provinces in England there are the medical departments of Queen's College, Birmingham, Owens College, Manchester, and the Medical College of the University of Durham, at Newcastle-on-Tyne; the Medical School affiliated to University College, Bristol; the Medical Faculty of University College, Liverpool (Royal Infirmary School of Medicine); the medical school in connection with the Yorkshire College at Leeds, and that attached to the Firth College in Sheffield. The University of Cambridge possesses a fully equipped and flourishing medical school, whilst the Medical Faculty of Oxford has had new life infused into it, and provision is now made for the adequate teaching of human anatomy and the other subjects required for the first B.M. examination. Arrangements are being made for instruction in Materia Medica and Pharmacy. Clinical instruction is given at the Radcliffe during every term by the Lichfield Lecturers in Clinical Medicine and Surgery.

In Scotland, the medical schools in which a complete course of professional education is given are those attached to the Universities of Aberdeen, Edinburgh, and Glasgow; the School of Medicine in Edinburgh; and Anderson's College, the Royal Infirmary School of Medicine, and the Western School of Medicine, in Glasgow.

In Ireland, the chief medical schools are, the School of Physic in Ireland, the School of Surgery of the Royal College of Surgeons in Ireland, and the Queen's Colleges at Belfast, Cork, and Galway. There are also several medical schools in Dublin: viz., the Carmichael College of Medicine and Surgery, the Catholic University, and the Ledwich School of Anatomy, Medicine, and Surgery.

For information regarding these institutions reference must, as we have already said, be made to the published prospectuses. We shall, however, endeavour to classify a part of the information therein contained under certain heads, viz., Clinical Instruction; Practical Surgery; Special Departments; Practical Physiology; Hospital Appointments; Tutorial Instruction; and Scholarships, Exhibitions, and Prizes.

CLINICAL INSTRUCTION.—At all the hospitals connected with medical schools, the physicians and surgeons deliver at stated intervals lectures on the cases under their care, in addition to making comments during their visits to the wards or in the operating theatre. In some instances, special provision is also made by the appointment of one or more of the hospital staff as clinical professors or lecturers; and in several of the hospitals a certain number of beds are specially devoted to the purpose of clinical instruction. At Guy's Hospital, detached wards containing forty patients are set aside for the purpose of instruction in clinical medicine, and are visited and their cases lectured on by the physicians in the winter, and by the assistant physicians in the summer session: the surgeons also select cases for clinical instruction. A similar arrangement exists at the London Hospital, where two wards are devoted to the express purpose of teaching clinical medicine; the cases being lectured on by the physicians in the winter, and by the physicians or assistant physicians

in the summer. Special clinical professorships in medicine and surgery, in addition to the ordinary clinical lectures given by the physicians and surgeons, exist at the King's and University College Hospitals. In the former, the professor of clinical medicine is Dr. George Johnson; and the professors of clinical surgery are Mr. John Wood and Sir Joseph Lister. In University College Hospital there are two special chairs, known as the 'Holme Professorships' of Clinical Medicine and Surgery. The Holme professor of clinical medicine is Dr. Sydney Ringer, who delivers clinical lectures three times a week, on the significance of the general signs of disease, and on the special modes of examination, diagnosis, and treatment of individual diseases. Lectures are also given by Dr. Bastian, Dr. Roberts, and Dr. Gowers. Dr. Barlow, Assistant Professor of Clinical Medicine, instructs in Physical Examination, in the Diagnosis of Diseases of the Heart and Blood-vessels and of Abdominal Diseases. Dr. A. Money instructs in the Examination of the Lungs and of the Urine. Lectures are given every Monday at 2 P.M. by Mr. Christopher Heath, the Holme Professor of Clinical Surgery; once a fortnight or oftener by Mr. Berkeley Hill and Mr. Beck. The Holme Professor holds a clinical examination every Friday at 3 P.M. Mr. Barker and Mr. Godlee, Assistant Professors of Clinical Surgery, hold examinations and instruct students in the observation and examination of patients. A special course of lectures on clinical surgery is given in St. Thomas's Hospital, the lecturer being Mr. John Croft. At St. George's Hospital, Mr. Timothy Holmes, the Hunterian Professor of Clinical Surgery, will deliver a course of lectures during the ensuing session. At Cambridge, clinical instruction in medicine and surgery is given in Addenbrooke's Hospital throughout the year. At Leeds, clinical classes meet at appointed hours to receive instruction in the wards from the physicians, and special courses of clinical lectures are given by Dr. Clifford Allbutt, consulting physician, and Mr. Wheelhouse and Mr. Pridgin Teale, consulting surgeons to the Infirmary. In the Liverpool Royal Infirmary, Dr. Glynn (one of the physicians) gives, once a week during the winter, practical instruction in clinical medicine and the methods of physical diagnosis. Two clinical tutors, in the Medical and Surgical Wards, are also appointed. A medical and a surgical clinical lecture are given every week in the Manchester Royal Infirmary. Elementary and Advanced Clinical Classes are formed by the members of the Infirmary staff at each of the trimestral periods, commencing with October, January, and May respectively. Advanced Classes in Clinical Medicine and Surgery are held for students in the last two years of their attendance at the Infirmary. In the Infirmaries of Aberdeen, Edinburgh, and Glasgow, clinical lectures on medicine, surgery, and midwifery are delivered by the medical staff of each institution. The Universities of Edinburgh and Glasgow have special professors of Clinical Medicine and Surgery. In the medical schools of Ireland, clinical courses are given through the session.

In connection with the subject of Clinical Instruction, reference must be made to means provided at several hospitals for the special purpose of training the students in the observation of cases. At the Charing Cross Hospital, a course of practical medicine is given by Dr. F. Willcocks and Dr. H. M. Murray. It includes the methods of examining organs, the examination of morbid products, case-taking, &c. At St. George's Hospital, a similar course is given by Dr. Whipham; at Guy's Hospital, by Dr. L. E. Shaw; and at the Middlesex Hospital, by Dr. Coupland. At several of the medical schools there are medical tutors, who instruct the students in the physical examination and systematic description of cases. The provision for practical clinical teaching made at University College Hospital has been referred to above. Classes for medical demonstration are held in the Manchester Royal Infirmary twice weekly during the summer by two of the medical officers: in these classes instruction is given in anatomy as applied to medicine, in physical and chemical examination, &c. In the University of Edinburgh, a class for instruction in clinical medicine is held in the wards of the Royal Infirmary by the clinical tutor.

Practical Surgery.—At most of the schools, special provision is made for instruction in this important branch of medical education. The courses embrace such subjects as the application of anatomy to surgery on the living person or the dead body; the methods of proceeding, and the manipulations necessary, in order to detect the effects of diseases and accidents; the performance of operations on the dead body; the use of surgical apparatus; the examination of diseased structures, as illustrated by preparations and recent specimens. The course of practical instruction is generally distinct from that of systematic surgery, and is in several instances given in the summer session. In the Liverpool School of Medicine, the lectures on Systematic Surgery are given thrice weekly, and there is a concurrent course of Practical Surgery twice weekly; besides which, a course of Operative Surgery is given in the summer.

Special Departments.—Due provision is made for both theoretical and practical instruction in *Midwifery and Diseases of Women*, so as to enable students to meet the requirements of the examining bodies.

Ophthalmic Surgery is taught both systematically and clinically by observation of cases at all the London schools: each hospital receiving cases of eye disease except the Charing Cross, the pupils of which are admitted to the practice of the Royal Westminster Ophthalmic Hospital. As far as can be gathered from the prospectuses, the material available for the practical teaching of this subject (as far as regards in-patients) is as follows: St. Bartholomew's Hospital, 26 beds; Charing Cross (Royal Westminster Ophthalmic Hospital), 50 beds; Guy's Hospital, 50 beds (also about 3,000 out-patients); London Hospital, 12 beds. The other hospitals have beds for ophthalmic cases, but the number is not stated. Provision for teaching ophthalmic surgery, theoretical and practical, is made in the provincial schools. In the Universities of Aberdeen, Edinburgh, and Glasgow, instruction in ophthalmic surgery is given; and the students are admitted to the practice of ophthalmic institutions in those cities. In the Extra-academical School of Edinburgh, and in the Schools of Medicine in Glasgow, courses of lectures on the subject are given. In Ireland, provision is made for the teaching of ophthalmic surgery in most of the medical schools.

Aural Surgery is taught as a special branch at all the London medical schools, and at the Leeds School of Medicine and the Bristol, Manchester, and Newcastle Royal Infirmaries among the provincial

schools; also at Aberdeen, by Dr. McKenzie Booth, in the Royal Infirmary, and in the Extra-academical School in Edinburgh, and in Anderson's College and the Royal Infirmary School of Medicine, and the Western Infirmary School of Medicine in Glasgow.

Diseases of the Throat.—Special instruction in the use of the laryngoscope, and in the diagnosis and treatment of diseases of the throat and larynx, is given at St. Bartholomew's Hospital by Mr. Butlin; at St. George's by Dr. Whipham; at Guy's by Mr. Symonds; at King's College Hospital by Mr. Barrow; at the London Hospital by Mr. T. M. Hovell, who delivers a course of lectures on the subject; at St. Mary's Hospital by Mr. Norton; at the Middlesex Hospital by Mr. Hensman (with Diseases of the Ear); at St. Thomas's Hospital by Dr. F. Semon; at University College Hospital by Dr. Poore; at the Westminster Hospital by Dr. de Havilland Hall; at the Bristol Royal Infirmary by Mr. Harsant; at the Manchester Royal Infirmary by Dr. H. Simpson; at the Newcastle-on-Tyne Infirmary by Dr. Hume (with Diseases of the Ear); in the Edinburgh Royal Infirmary by Dr. McBride (with Diseases of the Ear); in the Glasgow Royal Infirmary by Dr. Newman; in the Glasgow Western Infirmary by Dr. Walker-Downie; and at Aberdeen by Dr. McKenzie Booth.

Diseases of the Skin.—For the teaching of this important department of medicine, special provision is made in all the London Hospitals, in the Bristol General Hospital, in the Manchester Royal Infirmary, and in the Newcastle-on-Tyne Infirmary. Demonstrations of cases, and clinical lectures, are given at stated intervals, generally once a week. In University College Hospital, Dr. Radcliffe Crocker, the physician in charge of this department, gives clinical lectures on diseases of the skin once a fortnight. A course of lectures is given in the Edinburgh Extra-academical School. In Dublin, a course of instruction on diseases of the skin is given at the Adelaide Hospital.

Orthopædic Surgery is taught at St. Bartholomew's Hospital by Mr. Walsham; at the Westminster Hospital by Mr. Richard Davy, and at St. Mary's by Mr. Walter Pye.

Mental Diseases.—Lectures on Psychological Medicine are delivered as a separate course in most of the London schools. Special arrangements for clinical instruction are made in several instances: thus the students of St. Bartholomew's Hospital have access to a large public asylum; those of Guy's Hospital are admitted to Bethlem Hospital, those of the London Hospital to Bethnal House, and those of the Middlesex Hospital to the Leavesden Asylum. Two students of the London Schools, qualified to practise, are appointed for six months as resident clinical assistants in Bethlem Hospital. At Cambridge, clinical instruction is given at the county asylum at Fulbourn. At the Leeds School of Medicine, the students attend the West Riding Lunatic Asylum at Wakefield, where Mr. Bevan Lewis, the medical director, gives clinical lectures in addition to a course of systematic lectures at the school. In Manchester, a course of clinical lectures on mental diseases is given to senior students of Owens College, by Mr. G. W. Mould, at the Asylum in Cheadle. Clinical instruction is given to the students of Queen's College, Birmingham, at the Borough Asylum in Lunacy and Mental Disease, and Professor Whitcombe lectures on these subjects in the summer. At the Newcastle-on-Tyne College, instruction in psychological medicine is given by Dr. R. H. B. Wickham, medical superintendent of Coxlodge Asylum. In the University of Edinburgh, Dr. Clouston gives a course of Medical Psychology and Mental Diseases, with practical instruction at the Morningside Asylum. In the Extra-academical School, a similar course is delivered by Dr. Batty Tuke. In the Glasgow University a course of lectures on Insanity is given by Dr. D. Yellowlees, and in the Glasgow Royal Infirmary School of Medicine, by Dr. A. Robertson, in the City Parochial Asylum. In Dublin, special courses of lectures on mental diseases are given in the Richmond, Whitworth, and Hardwicke Hospitals, adjoining which is a large asylum containing over 1,000 patients. The lectures on psychological medicine are mostly delivered during the summer session.

Public Health.—Special courses of lectures on this subject are given at St. Bartholomew's, Charing Cross, Guy's, the Middlesex, and St. Thomas's Hospitals, and at King's and University Colleges. At St. George's Hospital it is included in the course of Medicine; and at the London, St. Mary's, and Westminster Hospitals, in that on Forensic Medicine. In University College, besides the lectures, instruction in the chemical and microscopic examination of air, water, and food is given in the hygienic laboratory. In several of the provincial schools, the subject is included in the lectures on Forensic Medicine. In Owens College, Manchester, lectures on hygiene are delivered by Dr. Ransome; in the Bristol Medical School by Mr. Davies; in the Newcastle College of Medicine by Mr. H. E. Armstrong; and in the Sheffield Medical School by Dr. Drew. In Scotland, also, the instruction in Public Health is given in connection with the lectures on Medical Jurisprudence. In Dublin there is a professorship of Hygiene in the school of the Royal College of Surgeons. In London, instruction in Sanitary Science is also given in the Parkes Museum of Hygiene, Margaret Street, now amalgamated with the Sanitary Institute of Great Britain.

PRACTICAL PHYSIOLOGY AND HISTOLOGY.—This subject is taught in all the schools, but more elaborate provision is made in some cases than in others.

At *St. Bartholomew's Hospital*, the course is conducted by a demonstrator and two assistant demonstrators, under the superintendence of the lecturers on Physiology and Chemistry.

At *Guy's Hospital*, Dr. Wooldridge gives a course of demonstrations on the normal histology of the animal body. The course is gone through during the summer session. A laboratory class in Practical Physiology, intended for advanced students, is also held by Dr. Wooldridge. It comprises Physiological Chemistry, Experimental Physiology, and advanced Histology and Embryology.

At *University College*, an elaborate course of instruction in Practical Physiology is given by Mr. Schäfer (Jodrell Professor of Physiology) and assistants. Practical instruction in Zoology and Comparative Anatomy is also given by the professor, Mr. Ray Lankester, and his assistants. For the details, we must refer our readers to the prospectus of the Medical Faculty, and also to that of the Faculty of Science, of the College.

At the *Westminster Hospital*, a course of lectures and demonstrations on Histology and Practical Physiology is given by Dr. P. S. Abraham.

In *Owens College, Manchester*, a very complete course of practical Physiology is conducted

during the year by Dr. Stirling, the Brackenbury Professor of Physiology. The class meets for systematic work in Practical Histology and Physiological Chemistry, and for demonstrations in Experimental Physiology. The Physiological Laboratory is open daily during the winter and summer sessions.

Courses of Practical Biology and Practical Physiology are also given in the other provincial Medical Schools, or in institutions in connection with them.

Practical Physiology is taught in the University of Edinburgh by Professor Rutherford; in that of Aberdeen by Professor McWilliam; and in that of Glasgow by Professor McKendrick. Courses are also given in the Edinburgh Extra-academical School; and in the Royal Infirmary School of Medicine, in Anderson's College, and in the Western Medical School in Glasgow.

HOSPITAL APPOINTMENTS.—Numerous appointments at the hospitals are open to the diligent student, without payment (except in the few cases hereinafter noticed) of any fee. For most of the resident appointments, a qualification to practise is required; and, in some instances, a salary is paid in addition to the provision of rooms and board.

At *St. Bartholomew's Hospital*, eight house-physicians and ten house-surgeons (who must be qualified to practise), and a senior and junior assistant chloroformist, are appointed annually. A resident midwifery assistant and an ophthalmic house-surgeon are appointed every six months. Each of these officers receives a salary of £25 a year, except the senior assistant-chloroformist, who receives £50. All, except the eight junior house-physicians and house-surgeons, are provided with rooms. The clinical clerks to the medical in-patients and the clerks to the physician-accoucheur are chosen from the most diligent students. Clerks and dressers are also selected to attend in the out-patient rooms and in the special departments and in the *post mortem* room. Dressers to the surgical in-patients and the surgical casualty department are selected, to the number of forty in each year, from the students (of the first year) who pass the best examination in the subjects of the first year. Other in-patient dresserships may be obtained by payment of £10 10*s*. for three months, or £16 16*s*. for six months.

At *Charing Cross Hospital*, a medical and a surgical registrar, each with a salary of £40 a year, are appointed for twelve months. Two house-physicians, two house-surgeons, and a resident obstetrical officer are appointed by competitive examination for six months. They are entitled to rooms and commons in the hospital. An electrical assistant is appointed every six months, and receives £12 12*s*. at the end of his term of office. Clinical clerks and surgeons' dressers, clinical ward clerks, and pathological assistants are appointed for three months. Each student must hold an in-patient clerkship and in-patient dresserships, after the first professional examination, in order to obtain certificates of hospital attendance. Students may serve as assistants to the dental surgeon for three months.

At *St. George's Hospital*, house-physicians, house-surgeons, an assistant house-physician, and an assistant house-surgeon are appointed, half-yearly, from among the perpetual pupils. The house-physicians and house-surgeons are appointed by the weekly board, on the nomination of the Medical School Committee; they hold office for twelve months, and reside and board in the hospital free of expense. They must each deposit £50 with the treasurer, which will be returned on the expiration of their term of office, if they have satisfactorily performed their duties. An obstetric assistant is appointed annually; he must be a legally qualified practitioner. He resides and boards in the hospital, and receives a yearly salary of £100. A curator of the Pathological Museum, and a medical and a surgical registrar, are appointed annually from among the senior pupils, each with a salary of £50. Two assistant medical registrars are appointed every six months by competition. This office must be held before competing for that of assistant house-physician. An assistant surgical registrar is also appointed; this office must be held, alternately with that of ophthalmic assistant, before competing for the office of assistant house-surgeon. Two demonstrators of anatomy and a demonstrator of physiology are appointed annually, each with a salary of £50. Each pupil of the hospital must act as clinical clerk and dresser before a certificate of attendance on hospital practice can be signed.

At *Guy's Hospital*, all appointments are given according to the respective merits of the candidates, and without extra payment. There are appointed annually house-physicians, house-surgeons, surgeons' dressers, and medical clinical clerks, for six months; dressers in the Eye Wards, for four months; clinical assistants, assistant-physicians' clerks, assistant-surgeons' dressers, dressers in the surgery, obstetric ward clerks, surgical clinical clerks, assistant-surgeons' clerks, for three months; obstetric residents, *post mortem* clerks, dental surgeon's dressers, aural surgeon's dressers, for two months; obstetric out-patient clerks, six weeks; extern obstetric attendants, one month; also clerks in the Electrical Department. A special honorary certificate is given to every gentleman who has diligently performed the duties of not less than three of the various offices; and special certificates are given to those who have attended one hundred cases of midwifery.

At *King's College Hospital*, physician's assistants, house-surgeons, a physician-accoucheur's assistant, clinical clerks, and dressers are chosen by examination from matriculated students of the College who are pupils at the hospital.

At the *London Hospital*, five house-physicians, five house-surgeons, and a resident accoucheur, are appointed every six months; a receiving-room officer, and a senior dresser to out-patients every three months. Clinical clerks, surgical dressers, and clinical obstetric clerks are appointed every three months. Every student must act as a clinical clerk for three months in the medical out-patient department, after passing the first College of Surgeons examination. Maternity pupils reside in the hospital every week. Each student must attend at least twenty cases of midwifery; those who have attended one hundred are entitled to a special certificate. Dressers reside and board in the hospital every week. Every student must act as dresser in the surgical out-patient department for at least three months after the end of the first winter session. Three clinical assistants are appointed every three months for the medical out-patients, and are eligible for re-election. Each receives a salary at the rate of £80 *per annum*. An unpaid clinical assistant is appointed in the ophthalmic department. A medical registrar and a surgical registrar are appointed annually; each receives £100. An instructor in anæsthetics is appointed annually, and receives

£50. Every student must act as a *post mortem* clerk for three months. A dental assistant, prosectors of anatomy, and dressers in the ophthalmic and aural departments, are also appointed. The holders of resident appointments are provided with rooms and board.

At *St. Mary's Hospital*, three house-physicians and three house-surgeons are appointed for six months each, and two obstetric officers for six months each; all live free of expense in the hospital. All students must act as clinical clerks and dressers for eight months after passing the primary examinations, and after having acted as dressers two months in the casualty department, and one month as assistants in the electrical department. A demonstrator of anatomy is appointed at a salary of £70, and a junior demonstrator at £50 a year. Two prosectors are appointed annually; each receives a certificate and £5. A demonstratorship in pathological anatomy, value £15, tenable for six months, is given after competitive examination in pathology and morbid anatomy.

At the *Middlesex Hospital*, sixteen resident appointments are open annually to competition among pupils of the hospital. The officers reside and board in the hospital free of expense. There are two casualty house-surgeons appointed annually. Six house-surgeons are appointed every year after examination; they must have a legal qualification, or hold a Broderip Scholarship. A resident obstetric physician's assistant (qualified to practise) is appointed for six months. Each of the above-mentioned resident officers pays (except the casualty house-surgeon) £10 10*s.* on appointment. Non-resident physicians' assistants are appointed in the out-patient department. Clinical clerks and dressers are appointed for six months. An obstetric physician's clerk is appointed. In the out-patient department the appointments are: dresser to the assistant surgeon and to the dental surgeon; clerk to the assistant physician; dresser to ophthalmic surgeon; clerk to the physician of the skin department, to the assistant obstetric physician, and to the surgeon to the throat and ear department. There are also extern and midwifery clerks, and *post mortem* clerks. The appointments are so arranged that every student may, during his course, take both a clerkship and a dressership. Each student must be an out-patient clerk or an out-patient dresser before being eligible to an in-patient clerkship or dressership. No student can be appointed to any office until he has passed the second examination of the examining board in England or its equivalent.

At *St. Thomas's Hospital*, a resident assistant physician and a resident assistant surgeon, at a salary of £100 per annum, each with board, are appointed, and may hold office for a term not exceeding three years. Two resident and two non-resident house-physicians, two house-surgeons, two assistant house-surgeons, and a resident accoucheur are selected from gentlemen who have obtained their professional diplomas; they hold office for three or six months. Two ophthalmic clinical assistants, chosen from qualified students, are appointed for six months, the senior receiving a salary at the rate of £50 per annum, and the junior being provided with commons. The house-physicians, the house-surgeons, the resident accoucheur, and dressers are provided with rooms and commons. Clinical clerks and dressers are selected each year, to the number of at least one hundred for in-patients, and eighty to one hundred for out-patients. Clinical assistants in the departments for diseases of the skin, throat, and ear are appointed every three months. Obstetric clerks are from time to time appointed; also assistants in the physiological laboratory, prosectors, and assistants to the demonstrator of pathological anatomy. All students have the opportunity of being engaged in the performance of the practical duties in connection with the medical, surgical, obstetrical, ophthalmic, and pathological departments of the hospital. Two hospital registrars are appointed, at an annual salary of £100.

In *University College Hospital*, eight house-physicians, six house-surgeons, eight obstetric assistants, out-patient physicians' and surgeons' assistants, clinical clerks, surgeons' dressers, and ophthalmic surgeons' assistants are selected from among the pupils. The house-physicians, the house-surgeons, and the obstetric assistants reside in the hospital, paying for their board.

At the *Westminster Hospital*, a curator of the museum and a pathologist are appointed annually, each with a salary of £50; and a medical and a surgical registrar, each with a salary of £40. Two house-physicians, two house-surgeons, and a resident obstetric assistant are appointed for six months, after examination, and are provided with rooms and commons. The surgeons' dresser of the day is provided with commons at the hospital table. Clinical assistants to the assistant physicians and assistant surgeons, and to the officers in charge of special departments, are appointed from among qualified students. Every student must perform the duties of out-patient dresser for four months; and afterwards hold the office of in-patient dresser for four months, of out-patient clinical clerk for four months, and of in-patient clinical clerk for four months. No student is eligible as in-patient dresser or clinical clerk until he has passed the Second Examination of the Conjoint Board, or an equivalent examination.

In the *Birmingham General Hospital*, a resident medical and a resident surgical assistant and two resident dressers are appointed, each for six months.

At the *Queen's Hospital, Birmingham*, a resident obstetric assistant is appointed every six months, and a resident dresser every three months.

At the *Bristol Royal Infirmary*, a house-physician, house-surgeon, and junior resident medical officer, clinical clerks and dressers, also ophthalmic, obstetric, and pathological clerks are appointed. The dressers reside in the Infirmary in weekly rotation.

At the *Bristol General Hospital*, clinical clerks, dressers, pathological clerks, and obstetric clerks are appointed. The dressers reside in the hospital in rotation, free of expense.

In the *Leeds General Infirmary*, house-physicians, house-surgeons, physicians' clerks, surgeons' dressers, ophthalmic and aural surgeons' dressers, gynæcological ward clerks, assistant-physicians' clerks, assistant-surgeons' dressers, dressers in the casualty room, and *post mortem* room clerks are appointed during the year. The house-physicians and surgeons' dressers hold office for six months; the house-surgeons for twelve months; the others for three months. The house-physicians and house-surgeons must have at least one legal qualification. Appointments are also open to students at the Leeds

Public Dispensary, and at the West Riding Lunatic Asylum.

At the *Liverpool Royal Infirmary*, two house-physicians and three house-surgeons are appointed for six months, after (if there be more applicants than vacancies) competitive examination. Candidates must have a legal qualification. Three clinical clerks for each physician, three or more dressers for each surgeon, and two clerks for the Thornton Wards for Diseases of Women are appointed for three months in October, January, and May. *Post mortem* clerks are appointed for six weeks. All students must perform this duty before the schedule for the final examination is signed.

At the *Manchester Royal Infirmary* the following appointments are made :—A surgical registrar, at £100 per annum ; a pathological registrar, at £100 per annum ; a medical registrar, at £50 per annum ; two assistant medical officers, each at £80 per annum ; a chloroformist, at £75 per annum. Resident medical officer, two years, £150 per annum ; ditto, at Cheadle, one year, £150 per annum ; ditto, at Monsall, one year, £250 per annum ; resident surgical officer, one year, £150 per annum ; eight house-surgeons and four house-physicians, a resident assistant at Monsall (salary £100 per annum) ; and one at Cheadle, each for six months. The house-physicians, house-surgeons, and the resident assistant at Monsall must possess a qualification which can be registered. Two or more clinical clerks are attached to each physician and assistant physician, and two or more dressers to each surgeon and assistant surgeon. Two clerks to the pathological registrar, and accident-room dressers, are appointed for three months.

In the *Newcastle-on-Tyne Infirmary*, four times in the year, two resident medical assistants, two resident surgical assistants, three non-resident clinical clerks, and sixteen dressers are appointed for three months. An assistant curator of the museum is annually appointed from among the senior students. Assistant demonstrators of anatomy, prosectors for the lecturer on anatomy, assistant physiologists, pathological assistants, assistants to the dental surgeon, and assistants in the Eye Department are also elected. The assistant demonstrators of anatomy receive £5 each ; the others are unpaid.

In the *Edinburgh Royal Infirmary*, the appointments are as follows :—1. Resident physicians and surgeons are appointed, and live in the house free of charge. The appointment is for six months, but may be renewed at the end of that period by special recommendation. 2. Special non-resident clerks are appointed for six months. The appointment may be renewed for a like period by special recommendation. 3. Clerks and dressers are appointed by the physicians and surgeons. These appointments are open to all students and junior practitioners holding hospital tickets. 4. Assistants in the pathological department are appointed by the pathologists. No fees are paid for any medical or surgical appointment.

In the *Glasgow Royal Infirmary*, there are four physicians' and six surgeons' assistants. These appointments are free, and can be held for twelve months : they are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in medicine or surgery. Clinical assistants, dressers, dispensary clerks, and pathological assistants are selected from the students without additional fee.

Tutorial Instruction.—In addition to the ordinary courses of lectures and hospital practice, and practical instruction, many of the medical schools have an officer whose special duty it is to direct the pupils in their studies, and to hold classes for the guidance of those who are about to present themselves for examination before the licensing boards.

Scholarships, Exhibitions, and Prizes.—In addition to the rewards for diligence in professional study, many of the medical schools offer yearly one or more scholarships, usually in general literature, and in some instances in science. The competition is open to gentlemen about to commence their hospital studies ; and the successful candidate is expected to enter as a pupil of the school in which the examination has been passed. In the examination in general literature, the subjects are usually those of preliminary education as defined by the General Medical Council, or of the Matriculation Examination of the University of London. In the Science scholarships, the usual subjects are Chemistry, Botany, and Zoology. The yearly value of the scholarships and exhibitions varies from £100 to £10.

There are also many scholarships and exhibitions, varying in value from £100 to £20, open to students during their period of professional study, or within a limited time after they have passed their final examinations for licences to practise. These exhibitions are in some cases awarded after examination in subjects of preliminary education ; in others, they are given after examination in groups of subjects of professional education, elementary or practical.

Special rewards are also offered in many of the schools for evidence of proficiency in clinical observation.

For further information respecting the scholarships and exhibitions, and regarding the class prizes, as well as for many details which we are obliged to omit, our readers must consult the prospectuses of the schools and our advertising columns.

FRANCE.

GRADUATION IN MEDICINE.

The degree of Doctor of Medicine in the University of France is conferred by the Faculties of Paris, Montpellier, Nancy, Bordeaux, Lille, and Lyons, under regulations laid down by the Government.

The studies necessary for obtaining the degree extend over four years. During the first three years, the student may attend either one of the Faculties, or an *École de plein exercice*, or one of the preparatory schools of medicine and pharmacy. The studies of the fourth year can only be pursued in a Faculty or in an *École de plein exercice*.

Sixteen inscriptions must be taken out, one every three months. On taking the first inscription, the student must present his certificate of birth, and, if a minor, the consent of his father or guardian ; also the diplomas of Bachelor of Letters and of Sciences.

Every candidate must go through a course of practical study as follows :—*First Year :* Physics, Chemistry, and Natural History. *Second and Third Years :* Anatomy and Physiology. *Fourth Year :*

Operative Surgery and Pathology. Attendance on hospital practice (which is also obligatory) commences after the eighth inscription and continues through the remaining period of study.

There are five examinations : the first, after the fourth inscription and before the fifth ; the first part of the second, three months after the tenth inscription and before the twelfth, and the second part after the twelfth and before the fourteenth inscription ; the third cannot be passed until three months after the sixteenth inscription. Candidates who do not pass the first examination in October or November at the latest are put back to the end of the scholastic year, and cannot take out any inscriptions during that year. Candidates rejected at the other examinations are put back for three months, except after the examination in Practical Surgery, when the period is six weeks. Two other examinations have to be undergone, and the candidate must present a thesis on a subject chosen by himself.

The subjects of the five examinations are as follows :—*First Examination :* Physics, Chemistry, and Natural History, in their application to Medicine. *Second Examination :* First part, Dissections, Anatomy, and Histology (oral) ; second part, Physiology (oral). *Third Examination :* First part, Performance of Operations, External Pathology, Midwifery, and Operative Surgery (oral) ; second part, Internal Pathology or Medicine, and General Pathology. *Fourth Examination :* Hygiene, Forensic Medicine, Therapeutics, Materia Medica, and Pharmacology. *Fifth Examination :* First part, Clinical Surgery and Obstetrics ; second part, Clinical Medicine and practical demonstrations in Pathological Anatomy.

Pupils of the *Écoles de plein exercice* may pass the first and second examinations in the school. For this purpose, two examinations are held each year ; one in August, for the first examination, and the second part of the second ; the other in April, for the first part of the second examination. Rejected candidates may present themselves, after three months, for examination by a Faculty of Medicine. Students of preparatory schools in which the instruction corresponds with the programme of the first three years of study required may pass in them the first examination and the first part of the second ; the second part of the second examination must be passed before a Faculty or in an *École de plein exercice*. Pupils of other preparatory schools may defer the first examination till after the twelfth inscription. In that case, they undergo both parts of the second examination before the thirteenth inscription, and, from the commencement of the second year of study, are submitted to examinations at the end of each six months, the results of which are transmitted to the Faculties, to be taken into account in the examinations for the doctorate.

Candidates for the diploma of *officier de santé* must take out sixteen inscriptions, the regulations regarding which are the same as for the degree of doctor. The programme of practical instruction to be pursued is : *First Year*, Physics, Chemistry, and Natural History ; *Second Year*, Anatomy, and Physiology ; *Third Year*, Anatomy, Physiology, and Operative Surgery ; *Fourth Year*, Anatomy and Operative Surgery. Attendance on hospital practice commences with the fifth inscription. The whole of the sixteen inscriptions may be taken out in a preparatory school, where a complete course of instruction, as mentioned above, is given. At other preparatory schools, not more than fourteen inscriptions can be taken out.

There are six examinations : one at the end of each of the first three years ; first, in Physics, Chemistry, Natural History, and Elementary Anatomy (bones and ligaments) ; second, in Descriptive Anatomy and Physiology ; third, in Medicine and Surgery. After the sixteenth inscription, there are three final examinations (*examens définitifs*) ; first, in Dissection, Anatomy, and Physiology ; second, in Operative Surgery, Medicine, Surgery, Therapeutics, and Materia Medica ; third, in Clinical Medicine, Surgery, and Midwifery. No thesis is required.

Foreign medical practitioners, desirous of permission to practise in France as *officiers de santé*, must present their diplomas to the Secretary of the Faculty of Medicine. If the Council of the Faculty report favourably the permission is granted. Foreign practitioners wishing to obtain the degree of Doctor of Medicine must pass the last two examinations and present a thesis, paying the full fees for all the examinations they would have had to pass had they gone through the ordinary course. Exception may be made in the case of medical men of acknowledged eminence, to whom the Faculty may at once grant all the privileges of the doctorate.

Foreigners may be admitted to a French faculty on presenting their certificates of study in their own countries and paying a fee of £4.

A small fee is required for each inscription, the sum thus payable amounting in the aggregate to 480 *francs*. The fees to be paid each year, including practical work and library (10 *francs*), are :—First year, 70 *francs* ; second and third years, each 50 *francs* ; fourth year, 30 *francs* ; for examination for the degree of doctor, each examination or part of examination, 55 *francs* (in all 440 *francs*) ; thesis, 240 *francs*. The total expense of the medical curriculum, including graduation fees, is thus 1,360 *francs*. *Officiers de santé* pay 30 *francs* for each of the three yearly examinations ; for the three final examinations, 100, 110, and 210 *francs* respectively.

MEDICAL EDUCATION.

Medical Education in France is under the control of the State, and is given in the Faculties of Medicine and Pharmacy, the *Écoles de plein exercice*, and the Preparatory Schools of Medicine and Pharmacy.

The Faculties are six in number : three—those of Paris, Montpellier, and Nancy—are schools of Medicine ; the others—at Bordeaux, Lille, and Lyons—are mixed Faculties of Medicine and Pharmacy. There are three *Écoles de plein exercice*—Nantes, Marseilles, and Toulouse. There are Preparatory Schools at Algiers, Amiens, Angers, Besançon, Caen, Clermont, Ferrand, Dijon, Grenoble, Limoges, Poitiers, Reims, Rennes, Rouen, and Tours.

FACULTY OF MEDICINE IN PARIS.

The School of Medicine in Paris is open to all who wish to attend the courses and take degrees. Great facilities are afforded to British and foreign students for the prosecution of their studies, all lectures being given gratuitously, and no payment being required for hospital attendance. For dissections, however, a payment of 40 *francs* is expected from each student.

The medical session begins on November 1.

The instruction in the Faculty of Medicine in

Paris is given by the following professors : M. Farabœuf, Anatomy ; Mathias Duval, Histology ; M. A. Gautier, Medical Chemistry ; M. Baillon, Natural History ; M. Gariel, Medical Physics ; M. Regnauld, Pharmacology ; M. Dieulafoy, Internal Pathology or Medicine ; M. Duplay, Practical Surgery ; M. Lannelongue, Surgery ; M. Hayem, Materia Medica and Therapeutics ; M. Cornil, Pathological Anatomy ; M. Laboulbène, History of Medicine and Surgery ; M. ——, Midwifery ; M. Proust, Hygiene ; M. Brouardel, Forensic Medicine ; M. ——, Comparative and Experimental Pathology ; MM. G. Sée, Potain, Jaccoud, Peter, Clinical Medicine ; MM. Richet, Verneuil, Trélat, Le Fort, Clinical Surgery ; M.——, Clinical Midwifery ; M. Grancher, Diseases of Children ; M. Charcot, Diseases of the Nervous System ; M. Panas, Clinical Ophthalmology ; M. Ball, Mental Pathology ; M. Fournier, Diseases of the Skin and Venereal Diseases.

Auxiliary courses are given by *agrégé* professors as follows : Anatomy and Physiology, MM. Rochet, Reynier, Rémy, Quenu, and Poirier ; Physics, M. Guébhard ; Medical Chemistry, MM. Hanriot and Pouchet ; Natural History, M. Blanchard ; Medicine and Forensic Medicine, MM. Landouzy, F. Raymond, Troisier, Joffroy, Hanot, Quinquaud, Hutinel, A. Robin, Brissaud, Ballet, Déjerine, and Chauffard ; Surgery, MM. Schwartz, Jalaguier et Brun, Peyrot, Bouilly, Reclus, Kirmisson, Segond, Campenon ; Obstetrics, MM. Budin, Ribemont-Dessaignes, and Maygrier.

Practical instruction is given under the guidance of the following *chefs des travaux* : M. Poirier, Anatomy ; M. Faguet, Natural History ; M. Hanriot, Chemistry ; M. Guébhard, Medical Physics ; M. Rémy, Histology ; M. Laborde, Physiology ; M. Brault, Pathological Anatomy.

The Faculty of Medicine possesses laboratories for Anatomy (Professor Farabœuf), Physics (Professor Gariel), Chemistry (Professor Gautier), Biological Chemistry (Professor Gautier), Practical Forensic Medicine (Professor Brouardel), Botany (Professor Baillon), Teratology (Director, M. Dareste), Experimental and Comparative Pathology (Professor ——), Therapeutics (Professor Hayem), Pharmacology (Professor Regnauld), Pathology (Professor Bouchard). There are also laboratories for practical instruction at several of the hospitals.

Attached to the Faculty of Medicine are the Botanical Gardens and Museum of Natural History ; the Orfila Museum of Anatomy and Zoology, at the École de Médecine ; the Dupuytren Museum of Pathological Anatomy, in the École Pratique ; and the Library.

The prizes of the Faculty of Medicine are the following :—The Corvisart prize, a gold medal of the value of 400 *francs* (£16) is offered for competition to all pupils of the Faculty who have also entered to one of the medical clinics. The subject is some question in medicine, the answer to which must be derived exclusively from facts observed in hospital practice. The Montyon prize, consisting of 700 *francs* (£28), is awarded to the author of the best essay on the prevalent diseases of the preceding year, their characters, symptoms, and treatment. The Barbier prize of 2,000 *francs* (£80) is offered annually to the inventor of an operation, or of instruments, bandages, &c., of general utility, and superior to anything of the kind that has been already in use. The Chateauvillard prize, also of 2,000 *francs*, is awarded yearly to the author of the best work on the medical sciences, printed between January 1 and December 31 of the preceding year. The works sent for competition must be in French. Graduation theses are admitted. An annual sum of 1,000 *francs* (£40) is awarded, under the will of the late Baron de Trémont, to a meritorious but poor student. An annual sum of 1,000 *francs*, bequeathed by Madame de Barkow, is applied to a similar purpose in the superior educational establishments in Paris. The Lacaze prize of 10,000 *francs* (£400) is offered biennially for the best essay on phthisis or on typhoid fever, the subjects being taken alternately. A sum of 1,500 *francs* (£60) was bequeathed by M. Jeunesse to found an annual prize for the best work on hygiene. M. Jeunesse also left a sum of 750 *francs* (£30) to found a biennial prize for the best work on histology. After the examination of the theses, the Faculty names to the Minister of Public Instruction the candidates worthy of special distinction, in the form of silver medals, bronze medals, and honourable mention. Students' bursaries of the value of 1,200 *francs* are awarded after competition. Each bursary is tenable for one year ; and the holder, if desirous of its renewal, must again compete. Candidates must be natives of France, and at least eighteen years of age. Travelling bursaries are also awarded.

The College of France.

In this institution, the following courses of instruction on sciences allied to medicine are given, viz., Experimental Medicine, by Dr. Brown-Séquard ; General Anatomy, by M. Ranvier ; Natural History of Organised Bodies, by M. Marey ; Comparative Embryogeny, by M. Balbiani ; Organic Chemistry, by M. Berthelot ; Mineral Chemistry, by M. Schützenberger. The Histological Laboratory is under the direction of M. Ranvier and M. Malassez, and is specially intended for the use of persons desirous of making original researches. The Physiological Laboratory, directed by Professor Marey and M. François-Franck, is open to persons who enter their names for the purpose with the Secretary of the Faculty of Sciences, and who have a sufficient knowledge of Physiology to enable them to undertake experimental research. The researches may have reference to any department of physiology, but special attention is paid in this laboratory to the phenomena of circulation and motion, and their registration by suitable apparatus.

Free Medical Instruction.

In addition to the professors in the Faculty of Medicine, there are a number of extra-academical lecturers whose teaching is recognised.

The Hospitals of Paris.

Pupils of the Faculty of Medicine in Paris attend, without payment, the practice of any hospitals which they may select. The visits of the physicians and surgeons are generally made at an early hour—8.30 or 9 A.M. The following is a list of these institutions :—

Hôtel Dieu, Parvis Nôtre Dame.—559 beds. *Physicians :* Drs. G. Sée, Empis, Bucquoy, Dumontpallier, Mesnet, and Proust. *Surgeons :* MM. Richet, Tillaux, and Panas. The hospital possesses laboratories for histology, chemistry, and physiology ; also a library for the use of the *internes*.

Hôpital de la Charité, 47 Rue Jacob.—516 beds.

Physicians: Drs. Potain (Clinical Professor), Blachez, Féréol, Laboulbène, Desnos, and Luys. *Surgeons:* MM. Trélat (Clinical Professor) and Desprès. *Obstetric Physician:* M. Budin. The library of this hospital contains a large number of works in anatomy, physiology, medicine, and surgery, including numerous theses.

Hôpital de la Pitié, 1 Rue Lacépède.—709 beds. *Physicians:* Drs. Jaccoud, Bourcy, Troisier, Audhoui, Hutinel, Lancereaux, and Brouardel. *Surgeons:* MM. Verneuil and Polaillon. *Obstetric Physician:* M. Maygrier.

Hôpital Lariboisière, 2 Rue Ambroise Paré.—704 beds. *Physicians:* Drs. Bouchard, C. Paul, Proust, Siredey, Duguet, Paul, Gouguenheim, and Gérin-Roze. *Surgeons:* MM. Périer, Anger, Berger, Delens (Diseases of the Eye). *Obstetric Physician:* M. Pinard. Besides the ordinary clinical instruction, instruction is also given in ophthalmic surgery and diseases of the larynx.

Hôpital Saint-Antoine, 184 Faubourg Saint-Antoine.—785 beds. *Physicians:* Drs. Hayem, Tenneson, Tapret, Gingeot, Moutard-Martin, Landrieux, Hanot, and Raymond. *Surgeons:* MM. Marchand and Monod.

Hôpital Necker, 151 Rue de Sèvres.—454 beds. *Physicians:* Drs. Peter, Rigal, Rendu, and Dieulafoy. *Surgeons:* MM. Le Fort and Guyon. The Civiale museum, containing numerous calculi and specimens of diseases of the urinary organs, is attached to the hospital.

Hôpital Tenon, Rue de la Chine.—825 beds. *Physicians:* Drs. Straus, Landouzy, Dreyfus-Brisac, Danlos, Cuffer, Moizard, Roques, and Barth. *Surgeons:* MM. Peyrot and Blum. *Obstetric Physician:* Dr. Bar.

Hôpital Beaujon, 208 Faubourg Saint-Honoré.—432 beds. *Physicians:* Drs. Millard, Guyot, Gombault, and Fernet. *Surgeons:* MM. Léon Labbé, Cruveilhier, and Duplay. *Obstetric Surgeon:* M. Ribemont-Dessaignes. The hospital possesses a library containing 1,500 volumes and a large number of theses.

Hôpital Cochin, 47 Faubourg Saint-Jacques.—386 beds. *Physicians:* Drs. Gouraud and Dujardin-Beaumetz. *Surgeon:* M. Th. Anger. *Obstetric Surgeon:* M. Bouilly. An obstetric department is attached to this hospital, but only a limited number of students are admitted to the morning visit.

Hôpital Laennec, 42 Rue de Sèvres.—628 beds. *Physicians:* Drs. Ball, Damaschino, Ferrand, and Cornil. *Surgeon:* M. Nicaise.

Hôpital Bichat, Boulevard Ney.—181 beds. *Physicians:* Drs. Huchard and Lacombe. *Surgeon:* M. Terrier.

Hospice de la Salpêtrière, Boulevard de l'Hôpital. 3,171 beds for old persons, and 720 for female lunatics. *Physicians:* Dr. Charcot and Joffroy. *Surgeon:* M. Terrillon. *Physicians to the Lunatic Department:* Drs. Falret, A. Voisin, and J. Voisin. There is a medical library founded and supported by the *internes*; it contains more than 1,500 volumes. M. Charcot, one of the physicians, gives a course of instruction on diseases of the nervous system; and MM. Falret and Voisin give courses of mental pathology.

Hospice de Bicêtre.—1,658 beds for old persons, and 640 for male lunatics and epileptics (the latter number includes nearly 340 epileptics and backward children). *Physician:* Dr. Déjerine. *Surgeon:* M. Reclus. *Physicians to the Lunatic Department:* Drs. Charpentier, Deny, Féré, and Bourneville. *Assistant Physician:* M. Chaslin. The library, which was founded in 1865, contains about 2,600 volumes.

Hôpital des Enfants Malades, 149 Rue de Sèvres.—593 beds. *Physicians:* Drs. Grancher, Labric, Simon, Ollivier, and Descroizelles. *Surgeon:* M. de Saint-Germain. There are wards for acute and chronic diseases, small-pox, and diseases of the eye.

Hôpital des Enfants Assistés, 74 Rue Denfert Rochereau.—675 beds. *Physician:* Dr. Sevestre. *Surgeon:* M. Guéniot.

Hôpital Trousseau, 89 Rue de Charenton.—463 beds. *Physicians:* Drs. Legroux, D'Heilly, Cadet de Gassicourt. *Surgeon:* M. Lannelongue.

Hôpital Saint-Louis, 40 Rue Bichat.—1,043 beds; of which 625 are occupied by cases of skin disease, 38 by obstetric, and the rest by surgical cases. *Physicians:* Drs. Quinquaud, Lailler, Vidal, Hallopeau, E. Besnier, and Fournier; *Surgeons:* MM. Péan, Le Dentu, and Lucas-Championnière; *Accoucheur:* M. Porak. General medicine is not taught in this hospital, but there are ample means for the special study of diseases of the skin, on which courses of theoretical and practical lectures are delivered. There is a museum containing several hundred models and drawings, illustrating diseases of the skin; to which is added M. Fournier's collection of illustrations of venereal diseases. The hospital is also rich in surgical cases.

Hôpital du Midi, 111 Boulevard du Port-Royal.—327 beds, devoted exclusively to the reception of cases of venereal disease. *Physicians:* Drs. Mauriac and Du Castel; *Surgeon:* M. Humbert.

Hôpital de Lourcine, 111 Rue de Lourcine.—243 beds. *Physicians:* Drs. Martineau and Balzer; *Surgeon:* M. Pozzi. Students are admitted to the hospital by special ticket.

Hôpital Andral, 35 Rue des Tourelles.—100 beds. *Physician:* Dr. Debove.

Hôpital Broussais, 96 Rue Didot.—148 beds. Served by two physicians and one surgeon from the Bureau Central.

Maison d'Accouchement, 123 Boulevard du Port-Royal.—402 beds. *Physician:* Dr. Labadie-Lagrave; *Surgeon:* M. Tarnier; *Assistant-Surgeon:* M. Bouilly. The hospital is employed exclusively for the education of midwives, and is not open to students of medicine. Attached to the hospital is a school for midwives.

Clinique d'Accouchements, 89 Rue d'Assas.—130 beds. *Surgeon:* M. ——.

HOSPITAL APPOINTMENTS IN PARIS: CONCOURS.

The medical staff of each hospital in Paris consists of—1. Physicians, Surgeons, and Obstetric Medical Officers; 2. Prosectors; 3. *Internes* and *Externes* in Medicine and in Surgery; 4. *Pharmaciens*; 5. *Internes* in Pharmacy.

All the appointments in the hospitals of Paris are obtained by *concours*; and, when vacant, are eagerly competed for.

Each medical service is under the direction of a physician, and comprises also an *interne* and three or four *externes*. The organisation of the surgical departments is similar; but the number of pupils is greater, and there are generally two or three *internes* and five or six *externes*.

The *interne* is the direct assistant of the hospital physician or surgeon; he accompanies him in his

morning visit, and himself visits the patients in the evening. The *internes* remain on duty in turn to attend to accidents and urgent cases of illness.

The *externes*, who are appointed for three years, have to take records of cases, either alone or under the direction of the *internes*, to assist the latter in dressing difficult cases, and to dress the minor cases.

The *concours* for the *externat* generally takes place in October. Candidates must not be under 18, nor above 26 years of age. They must produce, 1, a register of birth; 2, a certificate of revaccination; 3, a certificate of good conduct, signed by the mayor of the commune in which the candidate is domiciled; 4, a certificate of at least one inscription in a Faculty of Medicine. The examination consists in, 1, an oral description of some subject in descriptive anatomy; 2, a similar description of some elementary subject in pathology or minor surgery. For each five minutes are allowed, after five minutes of reflection. The maximum number of marks that can be gained by a candidate is 20 for each examination. The examination is conducted by four physicians and three surgeons of the central bureau.

The *concours* for the *internat* takes place nearly at the same time as that for the *externat*. Candidates must not be more than 28 years old, and must produce a certificate of having performed the duties of *externe*, at least from the first day of the preceding January, without interruption (unless this have been unavoidable); also certificates from the physicians and surgeons and the directors of the hospitals in which they have performed the duties of *externe*, testifying to their punctuality, obedience, and good conduct. The examination commences with a written essay on some subject in anatomy and medical or surgical pathology, for which two hours are allowed. This is followed by an oral examination in the same subjects, ten minutes being allowed for each answer after ten minutes of consideration. The maximum of marks obtainable for the written examination is 30; for the oral 20. At the end of the *concours*, the candidates are classified according to the number of marks; and the 35 to 40 first on the list are nominated *internes*.

In November, the *internes* are invited to compete for prizes. To those of the first and second years are offered a silver medal, books, and two certificates of honour. Those of the third and fourth years compete for a gold medal, a silver medal, and two certificates of honour. The successful candidate for the gold medal is entitled to two additional years of *internat*.

The *externe* who takes the first place in the *concours* receives the Arnal prizes (books and instruments, value 500 *francs*). The *interne* who comes out first in the *concours* for the appointment receives the Dusol prize (300 *francs*), the Godard prize (a box or case of instruments, value 200 *francs*); and, if he be attached to the surgical department of the Charité Hospital, the Barbier prize of about 1,250 *francs*. The Burlaud prize of 500 *francs* is awarded to one of the *internes* placed fifth, sixth, and seventh on the list; generally, however, the three divide it. The Civiale prize, of the value of 1,000 *francs*, is given every second year for the best essay, by an *interne* on duty, on some point in the pathology of the genito-urinary passages.

The *internes* receive 600 *francs* the first year, 700 *francs* the second year, 800 *francs* the third year, and 1,000 *francs* the fourth year. Most of them are also provided with lodging, fire, and light; if not they receive 600 *francs* yearly in lieu of lodging.

The *externes* at the central hospitals (Charité, Clinique, Hôtel-Dieu, and Pitié) are not paid; at those more distant from the centre of the city (Necker, Cochin, Enfants Malades, &c.) they receive 300 *francs* yearly; at others more distant (Beaujon, Lariboisière, Saint-Antoine, Trousseau, Saint-Louis), 365 *francs* yearly; at the Maison de Santé, 300 *francs* yearly, and 300 *francs* for expenses; at the Tenon Hospital, in consideration of the distance, 50 *francs* monthly.

Candidates for the office of physician, surgeon, or obstetric officer at the hospitals are admitted to *concours* on producing evidence of being natives of France, or naturalised, and of having had the degree of Doctor of Medicine for two years at least. They have to undergo a written and oral examination on the various branches of medicine and surgery.

GERMANY.

GRADUATION IN MEDICINE.

In the German Empire there are twenty Universities which possess a Medical Faculty and grant degrees in Medicine—namely, those of Berlin, Bonn, Breslau, Erlangen, Freiburg, Giessen, Göttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Rostock, Strasburg, Tübingen, and Würzburg.

No one can legally practise Medicine in this Empire unless he has passed the Staats-Examen. The law forbids any one to call himself *Arzt* (Physician) unless he have passed the State Board: or Doctor, unless he have obtained the degree after examination at some University. The Doctor who has not passed the State Board can hold no professional appointment, nor can he receive payment for his services. The practitioner who is neither doctor nor physician, if any mishap occur through his ignorance, is punished by fine and imprisonment. Most students pass both examinations, and this is especially necessary for those who aspire to any medical office.

No medical diploma of any kind can be obtained in Germany without a certificate of general education, obtained after examination at a gymnasium or public school in Greek, Latin, at least one Modern Language besides German, Logic, the Physical Sciences, and Mathematics. A candidate who cannot present this or an equivalent certificate must pass an examination in these subjects.

The number and character of professorial chairs in the Medical Faculties vary much in the different Universities; but in all there are three classes of teachers—professors, extraordinary professors, and *Privat-Docenten*.

The professors are appointed for life, and at the end of thirty years' service can retire on a pension; they receive a fixed salary from the State or University, a part of the revenue derived by the medical faculty from certain fees, and their lecture fees from the students. The fixed salary varies from £120 to £480 annually, and is increased every ten years by the addition of from £20 to £50. The students' fees for the entire course vary in different schools from £36 to £52.

The extraordinary or assistant professors are appointed from among the *Privat-Docenten*. As a rule,

their remuneration is derived solely from students' fees, but occasionally a small fixed salary is allowed.

There are no independent schools in Germany; but young men of ability can establish themselves as private teachers, demonstrators, &c., in the immediate vicinity of the Universities, relying on their own abilities to secure pupils. These are the *Privat-Docenten*, much of whose teaching consists in giving short courses, of from six to eight weeks' duration, on special subjects. Their remuneration is from students' fees, and they may not underbid the regular professor. At some Universities they are furnished with rooms, and given a share of the clinics; at others, they receive little or no assistance.

The course of study at the German Universities varies according to the requirements for the particular medical degree, but in no case is it less than three years, whilst at some it extends over four years. The following lectures are the least which will be accepted by any of the University Faculties, and may be taken in whatever order the student may wish. The courses occupy nine-and-a-half months in each year. For one year: Chemistry, six hours weekly; Physics, four hours weekly; Zoology and Comparative Anatomy, three hours weekly; Botany, three hours weekly; Mineralogy and Geology, two hours weekly; Anatomy, Histology, and Preparation of Specimens, ten hours weekly; Physiology and Laboratory Work, eight hours weekly; General Pathology, Pathological Anatomy, and Practical Work, six hours weekly; Pharmacology and Toxicology, two hours weekly; Obstetrics and Gynæcology, with Clinics, three hours weekly; Eye and Ear Clinics, Use of Ophthalmoscope, Operations, four hours weekly; Forensic Medicine, two hours weekly. For two years: Special Pathology and Medical Clinic at a Hospital, ten hours weekly; General and Special Surgery, Hospital Clinics, and Operations, ten hours weekly for one year, or five hours weekly for two years. This course may not be taken at the same time as the previous medical course.

REGULATIONS FOR THE STATE EXAMINATION.

The following are the regulations for the German Staats-Examen, as decided by an Order in Council, dated June 2, 1883. They came into force on Dec. 1, 1883.

1. Permission to practise Medicine within the German Empire may be granted by the following bodies:—*a*. The central authorities of those confederate States which possess one or more universities—namely, the Universities of the kingdoms of Prussia, Bavaria, Saxony, and Würtemberg, of the Grand Duchies of Baden, Hesse, and Mecklenburg-Schwerin, together with the Universities of the Grand Duchy of Saxony and of the Saxon Duchies; *b*. The Ministry of Alsace-Lorraine.

2. Permission to practise is granted to any one who has passed a complete professional examination.

3. The examination may be conducted by a medical examining commission in a University of the German Empire. The commission, including the president and secretary, is chosen every year after consultation with the Medical Faculty of the University in which the examinations are to be held.

4. The examinations commence in November, and are not continued beyond the middle of July in the following year. Applications for admission to the examination are received by the proper authorities up to Nov. 1; delayed applications can only be granted for special reasons. Candidates who complete the prescribed course of medical study at Easter require, in order to be admitted to examination during the current examining year, a special permission, which is only granted under exceptional circumstances. The application for admission to examination must be accompanied by the following documents:—*a*. Evidence of a full course of instruction at a gymnasium of the German Empire; certificates from a gymnasium outside the Empire are only exceptionally received; *b*. Evidence of having gone through a course of medical study of at least nine half-years' duration, in a University of the German Empire; certificates from foreign universities are recognised, wholly or in part, only in exceptional circumstances; *c*. Evidence that the candidate has passed the medical preliminary examination (*Verprufung*) in a German University, and has subsequently studied Medicine in a University during at least four half-years; *d*. Evidence that the candidate has, during at least two complete half-years, been occupied as medical officer (*Praktikant*) in the surgical, medical, and obstetrical wards of a hospital; that he has himself conducted at least two labours in the presence of his teacher as an assistant; and that he has acted as *Praktikant* for a half-year in an ophthalmic hospital; *e*. A short account of the candidate's life. Within three weeks after receiving permission to present himself, the candidate must apply personally to the President of the Examining Committee, producing his permission and a receipt for the fees. No special notice of this is given to the candidate.

5. The examination embraces:—*a*. Anatomy; *b*. Physiology; *c*. Pathological Anatomy and General Pathology; *d*. Surgery and Ophthalmic Surgery; *e*. Medicine; *f*. Obstetrics and Gynæcology; *g*. Hygiene.

6. The examination in Anatomy includes:—*a*. A demonstration of the parts contained in one of the principal cavities of the body, or a dissection and demonstration of some region of the trunk or limbs; *b*. The making and demonstration of an anatomical preparation, to be followed by an examination in Osteology, and by one on the viscera, nerves, or vessels, of a preparation placed before the candidate; *c*. The making and demonstration of a microscopic preparation, and an examination in Histology.

7. In the Physiological examination the candidate has to give *vivâ voce* answers to two questions.

8. In the Pathological examination the candidate must—*a*. Make a complete examination of at least one of the three principal cavities of the body, and write a report on the same; *b*. Explain one or more pathological preparations, one at least of which must be microscopic, and also answer a question in general Pathology, and one in Pathological Anatomy.

9. Each of the divisions *a*, *b*, *c*, and *g* of the examination is conducted by one examiner. Not more than four candidates can be examined at the same time in any division.

10. The Surgical and Ophthalmological examination embraces four parts, three relating to General Surgery and one to Diseases of the Eye. The three surgical portions of the examination are conducted by two examiners in the surgical wards of a large general hospital, or in a University clinic, or on the

patients in a polyclinic. *a.* On each of two consecutive days the candidate has to examine a patient in the presence of an examiner, and to give the previous history, diagnosis, prognosis, and treatment of the case; the record is to be given to the examiner, and, on the same day, the candidate must write at home a critical commentary on the case, and deliver it next morning, dated and signed, to the examiner. *b.* He must, during the next seven days, visit each of the two patients at least once a day, or, if the examiner require, twice daily, and keep, in a form which is supplied to him, a daily report of the progress of the case; if the patient die before the end of the seven days he must write a commentary, with an account of the *post mortem* examination. If the patient be discharged before the end of the seven days, the examiner may determine whether the candidate shall examine another patient. The candidate is also required to give evidence, on other patients, of his ability to recognise surgical diseases, and of his skill in performing minor surgical operations. *c.* He must undergo a *vivâ voce* examination in operative surgery, perform on the dead body an operation, such as the ligature of an artery, and show that he possesses a knowledge of instruments adequate for a practising surgeon. *d.* He must be examined orally and practically on fractures and dislocations. Two examiners must be present at *c* and *d*. Each examiner must be present at least three times during the examination (*b*) to go through the report with the candidate, and, if necessary, require additions. In the clinical portion of examination (*a*) and (*b*) not more than three candidates, in the technical part not more than six, can be examined at the same time. The examination in Ophthalmology is conducted by one examiner, in whose presence the candidate must examine and report on a case of disease of the eye. He must visit the patient for three subsequent days, and during this time prove, on other cases, that he possesses a knowledge of the principles of ophthalmic surgery. Three candidates at most are admitted simultaneously to this examination.

11. The Medical Examination is conducted, as regards the clinical portion, on the same plan as the surgical; and the candidate has to answer, in writing, in the presence of an examiner, questions on prescribing, to state the maximum doses of medicinal substances shown to him, and to give oral proof that he has an adequate knowledge of Pharmacy and Toxicology. This portion of the examination may be entrusted to a third examiner. Not more than three candidates can be examined at the same time.

12. The Obstetric and Gynæcological examination is conducted by two examiners in a public lying-in institution. *a.* The candidate must, in the presence of the examiner or of an assistant medical officer of the institution, examine a woman in labour, and state the period of labour, the position of the child, the prognosis, and the proper proceeding to be followed; in cases of normal, and, if required, of abnormal labour, he must apply the necessary aid, including operation; and, after the labour is completed, he must write within twenty-four hours a critical account of the case and hand it to the examiner the next day. *b.* During the next seven days he must visit the woman twice daily, and must draw up a complete report on the case of the mother and child, and on any diseases by which they may be affected. During the same time he will have opportunities of proving his knowledge of pregnancy and labour and of the diseases of women. If the woman who has been confined die before the end of seven days, he must draw up a critical report of the case, with an account of the necropsy. *c.* The candidate must, in the presence of both examiners, show his acquaintance with recognised obstetric operations, and must, on the phantom, make the diagnosis of the various abnormal presentations, perform turning, and apply the forceps. Not more than one candidate can be clinically examined on the same patient; and, in the technical examinations, not more than four can be examined simultaneously.

13. In Hygiene, the candidate has to give oral answers to two questions put by one examiner in the presence of the president. Each candidate is examined for not longer than fifteen minutes.

14. The questions to be put in the Sections 6, *b*, *c*, 7, 8*c*, 10A *c*, *d*, and 13 are determined by lot. If necessary, the examiner may put other questions bearing on the subject of examination.

15. Students of medicine are admitted to the first three and the seventh divisions of the examination; those who have attended or held office in the respective clinics are admitted to the clinical portions.

16. A special report is made of the result of each division of the examination; with, if the judgment be 'insufficient' or 'bad,' a short statement of the grounds of the decision.

17. The questions and the patients in each examination are seen by the candidate for the first time at its commencement. As a rule, an interval of not more than eight days comes between two divisions of the examination. Candidates for admission to the examination in Physiology must have passed that in Anatomy; and both these must have been passed before admission to the remaining portions. The order in which these may be taken is determined by the president; but the examination in Obstetrics and Gynæcology must not immediately follow that in Pathology. If a candidate fail in any one of the subjects except Anatomy and Physiology, he may either present himself at once for examination in the other subjects, or defer it until he is again examined in the subject in which he has failed.

18. The result of the examinations is denoted by the terms 'very good,' 'good,' 'sufficient,' 'insufficient,' and 'bad.' A candidate on whom one of two examiners makes the report 'insufficient,' or 'bad,' is rejected.

19. After the completion of the examinations in each division, the reports are delivered to the president, who sums up the results.

20. If the result of the examination in any one division or part of a division be 'insufficient' or 'bad,' the candidate must be again examined in that subject. If the decision on an entire division be 'insufficient,' the candidate is not readmitted to examination under three months; if 'bad,' not under six months. If the candidate fail in a portion of one of the divisions, the interval must be at least six weeks for 'insufficient,' and at least three months for 'bad.' In all cases the re-examinations must be undergone in the next following examination year at latest, otherwise the previous portions of the examination must be repeated. Exceptions are allowed only for special reasons. A candidate rejected at the second examination is not again admitted to examination except under special circumstances.

The fees for the examinations amount to 200 marks

(about £10); namely, Anatomy, 20; Physiology, 12; Pathology, 16; Surgery and Ophthalmology, 57; Medicine, 35; Obstetrics and Gynæcology, 24; Hygiene, 6; Expenses, 30.

PRELIMINARY MEDICAL EXAMINATION.

The following are the regulations for the examinations referred to in Section 4 *c.* of the preceding :—

1. The preliminary medical examination is conducted by the examining board of the University in which the candidate has matriculated. Exceptions can only be allowed by the Chancellor of the Empire acting in conjunction with the central authority. The examining board consists of the Dean of the Medical Faculty as president, and the teachers of the subjects of examination.

2. The president has the management of the examination. As many examinations are held in each academical half-year as will meet the demands. Applications made later than fourteen days before the end of the lectures have no claim to consideration during the current half-year. Not more than four candidates are admitted to any one examination.

3. Applications for admission to examination must be addressed to the president, and must be accompanied by (*a*) a certificate of maturity from a gymnasium, (*b*) evidence of professional study during at least four half-years in a German University. The regulations concerning recognition of foreign gymnasia and universities are similar to those for the Staats-Examen.

4. If the student be admitted, and have paid the fee, he receives through the president at least two days' written notice of the examination. If he do not appear at the right time, or fail to appear at all, half the fee is forfeited, and he is put back to one of the next examination terms.

5. The examination is oral and public, the president being present throughout. The student is examined in Anatomy, Physiology, Physics, Chemistry, and Botany by the teachers of the respective subjects, and in Zoology by a teacher of Anatomy or of Zoology. The examination in each subject is of fifteen minutes' duration. Candidates who have obtained the degree of doctor after examination in the Natural Sciences are examined only in those subjects which were not included in the previous examination.

6. The circumstances and results of the examination are reported by each examiner to the president and other members of the Commission.

7. The result of the examination is denoted as 'very good,' 'good,' 'sufficient,' 'insufficient,' or 'bad.' If the decision be 'insufficient' or 'bad,' the candidate must be again examined in the subjects in which he has failed. Botany and Zoology are counted together in estimating the result. The interval of time that must elapse before the candidate can be again examined varies from two to six months. It is fixed by the president, with the consent of the examiner.

8. The re-examination may take place in another University, if the candidate have matriculated therein.

9. Within two days after the end of each term of examination, the president must communicate to the University authorities the result of the examination. A certificate of the result as regards each subject is given to the candidate; and if he be rejected in any subject, the time which must elapse before re-examination is stated.

10. The fee for the examination and certificate is 36 marks. Doctors in Philosophy or Natural Science (*see* Section 5) pay only the fees of the president (5 marks) and of the member of the board by whom they are examined. At re-examination, the candidate has to pay the fees of the president and of the member by whom the examination is conducted.

UNIVERSITY OF BERLIN.*

THE conditions for promotion to the Doctorate of Medicine, Surgery, and Midwifery, at the Royal Frederick William University in Berlin, are as follows :—

1. Candidates must have studied medicine at least four years in one or more regularly constituted Universities. Universities and Medical Colleges abroad are deemed equivalent to the Universities in Germany. 2. Candidates under 30 years of age who have not matriculated at this University, or who have left previously to their application for promotion, must matriculate again. This can be done free of cost. Both these and matriculated students of this University must, before making application for promotion, take out a preliminary certificate of having left, and will not receive the real certificate until after promotion. 3. The candidate has to make application to the Dean, handing in at the same time the documents mentioned under 1 and 2. He has then to pass a written and verbal preliminary examination before the Dean before being admitted to the *examen rigorosum*. The verbal examination is generally conducted in German or Latin, and extends to all branches of medicine. At the written examination an extempore essay must be written, without any assistance, in a given time. 4. After the preliminary examination the Dean lays before the Faculty the documents having reference to the personality and the course of studies of the candidate, the judgment respecting the preliminary examination and the essay composed thereat. Should that body decide for admission, the Dean will appoint as early a time as possible for the *examen rigorosum*. 5. The *examen rigorosum* takes place before six members of the Faculty, is verbal only, and is concluded at one sitting, each of the examiners questioning the candidate for a quarter of an hour. No branch of medicine and surgery is excluded. It is generally held in German, but, if necessary, in Latin. If a candidate be rejected, six months must elapse before readmission. 6. After this the candidate must present a German or Latin dissertation. The essay must be entirely original, and the candidate must declare on oath in writing that he has composed it entirely himself. If the manuscript be pronounced good by the Faculty the candidate will have to get printed, at his own expense (about 85 *marks*), by a certain printer, a prescribed number of copies. It must consist of at least two quires, and give evidence of a good scientific knowledge. To this must be annexed a brief *curriculum vitæ*, and at least three theses approved by the Dean. 7. After this, follows the public discussion in the Aula of the University. The discussion has reference both to the dissertation and to the theses.

* For much of the information in this and subsequent pages we are indebted to Dr. Hardwicke's *Medical Education and Practice in all Parts of the World.*

Next, the opponents chosen by the candidate, who must be at least three in number, divide on the subject. Their names must appear on the title-page of the dissertation. Afterwards, any one belonging to the University is at liberty to oppose. Both the candidates and the opponents must be dressed in black. The discussion is either in German or in Latin. The Minister of Education may allow the use of another language, and may also dispense with the discussion. 8. After the discussion is ended, the oath-taking and promotion of the candidate as a Doctor of Medicine, Surgery, and Midwifery takes place. After the ceremony of promotion is completed, the Dean delivers the diploma to the newly created doctor, who inscribes his name in the book of the Faculty. The expense of making out the diploma (15 *marks*) is borne by the candidate. A copy of it is fixed on the blackboard of the Faculty, and a certain number of copies are delivered to the Registrar of the University, for distribution. Promotion *in absentiâ* can on no account take place. 9. Four hundred and forty *Reich-marks* (£22) must be paid to the Dean as fees for the Degree of Doctor in Medicine, of which 221 *marks* must be paid on application, and are forfeited after the *examen rigorosum* if the candidate be unsuccessful. The second portion (204 *marks* for the Faculty and 15 *marks* for the University library) may be paid either at the same time with the other, or within the period between the *examen rigorosum* and the promotion. In addition, the candidate has to pay the expenses of printing the dissertation and diploma. 10. The shortest time in which the whole of the proceedings for obtaining a doctor's degree can be gone through is ten days. In this case, however, the dissertation must be delivered ready for printing to the Dean at the first application, and the other business of the Faculty must be such as permits them to proceed at once to the examinations.

The Medical Faculty of this University consists of the following professors, with between forty and fifty *Docenten*, or private teachers. *Ordinary Professors:* W. Waldeyer and — Hertwig, Anatomy; A. Bardeleben and E. von Bergmann, Surgical and Clinical Surgery; R. Virchow, Pathology; E. Du Bois-Reymond, Physiology; A. Hirsch, Medicine and History of Medicine; E. Leyden and C. Gerhardt, Medicine and Clinical Medicine; Dr. Gusserow and Dr. Olshausen, Obstetrics and Gynæcology; O. Liebreich, Materia Medica; C. Schweigger, Diseases of the Eye and Ophthalmic Clinic; C. Westphal, Psychology and Psychiatric Clinic; R. Koch, Hygiene. *Extraordinary Professors:* E. Henoch, Diseases of Children; E. Gurlt, Practical Surgery; C. Liman, Forensic Medicine; C. Skrzeczka, Hygiene and Medical Police; J. Meyer, Medicine; R. Hartmann, Anatomy; G. Lewin, Diseases of the Skin and Syphilis; H. Jacobson, Medicine; H. Munk, Physiology; C. A. Ewald, Medicine; A. Lucae, Aural Surgery; E. Salkowski, Chemistry; G. Fritsch, Physiology; O. Fräntzel, Medicine; H. Senator, Medicine; F. Busch, Surgery; H. Fasbender, Gynæcology; H. L. Schöler and J. Hirschberg, Ophthalmic Surgery; E. Küster, Surgery; A. Christiani, Medical Physics; M. Bernhardt, Neurology; E. Sonnenburg, Surgery; E. Schweninger, Diseases of the Skin; J. Wolff, Surgery; E. Mendel, Diseases of the Nervous System; B. Fraenkel and H. Krause, Laryngology; Dr. Falk, Legal Medicine. The following professors also give instruction in subjects connected with medicine in the Philosophical Faculty. *Ordinary Professors:* L. Schwendener, Botany; H. Helmholtz, Physics; A. W. Hofmann, Chemistry; F. E. Schulze, Zoology; A. W. Eichler, Botany; C. Rammelsberg, Chemistry.

The institutions for Clinical Teaching connected with the University are—the Institute for Clinical Surgery (Director, Dr. von Bergmann); the Medical Polyclinic (Dr. Meyer); the Obstetric Clinic (Dr. Olshausen); the Ophthalmic Clinic (Dr. Schweigger); the Aural Clinic (Dr. Lucae). In the Charité Hospital are the Medical Clinics (Dr. Gerhardt and Dr. Leyden), the Surgical Clinic (Dr. Bardeleben), the Obstetric Clinic (Dr. Gusserow), the Gynæcological Clinic (Dr. Gusserow), the Clinics for Diseases of the Skin and Syphilis (Dr. Lewin), for Diseases of Children (Dr. Senator), and for Diseases of the Mind and Nervous System (Dr. Westphal). The Pathological Institute is under the direction of Professor Virchow; the Physiological Laboratory under that of Professor Du Bois-Reymond; the Chemical Laboratory under that of Professor Hofmann; the Pharmaceutical Laboratory under that of Professor O. Liebreich; the Physical Institute under that of Dr. von Helmholtz; and the Hygienic Institute under that of Dr. R. Koch.

UNIVERSITY OF BONN.

A DEGREE in Medicine, Surgery, and Midwifery is granted only under the following conditions:—

1. An examination in all branches of Medicine and Surgery of about three hours' duration in the German language. 2. A written scientific dissertation in German or Latin. 3. Public defence of the dissertation in German or Latin. 4. Fee for the examination and diploma, 360 *marks* (£18), which must be paid prior to examination.

The following are the Professors in the Medical Faculty of this University. *Ordinary Professors:* C. Binz, Materia Medica; F. Trendelenburg, Surgery; C. Köster, Pathology; A. de la Valette St. George, Anatomy and Histology; — Leydig, Zoology and Comparative Anatomy; E. Pflüger, Physiology; H. Rühle, Medicine; T. Sämisch, Diseases of the Eye; G. Veit, Obstetric Medicine and Gynæcology; W. Nasse, Clinical Psychiatry; — Kekulé, Chemistry. *Extraordinary Professors:* C. Finkelnburg, Mental Diseases; J. Doutrelepont, Surgery; C. von Mosengeil, Surgery; H. Schaaffhausen, Physiology; M. Nussbaum, Anatomy and Histology; H. Walb, Diseases of the Eye and Ear; D. Finkler, Medicine; F. Fuchs, Medical Physics; H. Ribbert, Medicine and Pathology.

Connected with the University are medical, surgical, obstetric, and ophthalmic clinics; an anatomical theatre and museum, and physiological, pathological, pharmacological, physical, botanical, and chemical institutes.

UNIVERSITY OF BRESLAU.

THE following Professors belong to the Medical Faculty of this University. *Ordinary Professors:* A. Biermer, Medicine; E. Ponfick, Pathology; H. Fischer, Surgery; R. Förster, Ophthalmic Surgery; W. Filehne, Materia Medica and Therapeutics; C. Hasse, Anatomy; R. P. H. Heidenhain, Physiology; H. Fritsch, Obstetrics and Gynæcology; C. Flügge, Medical Chemistry and Hygiene. *Extraordinary*

Professors: L. Auerbach, Comparative Anatomy; H. Cohn, Ophthalmology; R. Gscheidlen, Physiology and Physiological Chemistry; I. Klopsch, Surgery; A. Neisser, Diseases of the Skin and Syphilis; E. Richter, Surgery; R. Voltolini, Diseases of the Ear; L. Hirt, Forensic Medicine and Hygiene; H. Sommerbrodt, Medicine; O. Soltmann, Diseases of Children; H. Magnus, Ophthalmology; G. Born, Anatomy; C. Wernicke, Psychiatry; J. Gottstein, Laryngology.

The University possesses anatomical, physiological, pathological, pharmaceutical institutes, and clinics of medicine, surgery, obstetrics, ophthalmic surgery, syphilis and skin diseases, and mental diseases.

UNIVERSITY OF ERLANGEN.

THE following are the regulations to be observed by candidates for the degree of Doctor of Medicine:—

1. Candidates must announce their intention to the Dean of the Faculty of Medicine, and present: *a*, evidence of having gone through the curriculum in a German gymnasium, or proof of equivalent general education; *b*, proof of having studied medicine in one of the German Universities, or in a corresponding medical school abroad, during at least three years; *c*, a thesis, composed by the candidate, on some subject in medicine or natural science, with a written declaration, on word of honour, that the work is absolutely the candidate's own. 2. If the dissertation be judged to be of sufficient merit, the candidate is admitted to an oral examination, which is conducted in the German language. 3. After the conclusion of the oral examination, the examiners decide on the result. If the decision be favourable, the degree of Doctor is at once conferred. 4. The candidate, if his dissertation be approved, must have it printed at his own expense. 5. The candidate must pay a fee of 300 *marks* (equal to about £15 10*s.*) for the granting of the Doctor's degree, and must also deliver 150 copies of his dissertation to the Faculty. 6. If the candidate fail to pass the examination, half the fee is returned to him.

The Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors:* J. von Gerlach, Anatomy; F. A. Zenker, Pathology and State Medicine; W. Heineke, Surgery; I. Rosenthal, Physiology; A. Strümpell, Practice of Medicine and Clinics; F. Penzoldt, Ophthalmology; — Frommel, Midwifery; O. Eversbusch. *Extraordinary Professors:* F. W. Hagen, Psychological Medicine; L. Gerlach, Anatomy; R. Fleïscher, Medicine.

In connection with the University are the following institutions: the University Hospital, with medical, surgical, obstetric, psychiatric, and ophthalmic clinics; an anatomical, a physiological, and a pathological institute.

UNIVERSITY OF FREIBURG.

THE Faculty of Medicine grants a degree in Medicine, Surgery, and Midwifery. The following are the conditions to be observed:—

1. A certificate must be produced showing the respectability of the candidate, and also the amount of his education, both prior to and since his admission as a medical student. 2. A scientific dissertation must be written in German or Latin. 3. A fee of 300 *marks* (£15) must be paid. In case of rejection, the candidate will receive back half the fee; and when he presents himself for examination again, he pays only that amount—viz., 150 *marks*. Should these conditions be complied with, and the thesis be deemed satisfactory, the candidate is admitted to a *vivâ voce* examination, conducted in German, on the following subjects: Anatomy, Materia Medica and Toxicology, Physiology, Medicine, Surgery, Pathological Anatomy, Midwifery, and Ophthalmology. If a candidate have already passed an examination as Physician before a German Commission of Examiners, the number of subjects may be reduced. If the examination be passed, one of the following grades of honour is conferred: (1) *Summâ cum laude;* (2) *Insigni cum laude;* (3) *Cum laude.*

The Medical Faculty of the University is thus constituted. *Ordinary Professors:* A. Ecker, Human and Comparative Anatomy; R. Maier, Pathological Anatomy and State Medicine; A. Hegar, Midwifery; F. Hildebrand, Botany; W. Manz, Ophthalmic Surgery; Ch. Bäumler, Medicine; G. F. L. Thomas, Materia Medica and Medicine; P. Kraske, Surgery; E. Baumann, Physiological Chemistry; R. Wiedersheim, Anatomy; J. von Kries, Physiology. *Extraordinary Professors:* A. Schinzinger, Surgery; H. Emminghaus, Psychiatry; J. Strasser, Anatomy; M. Schottelius, Pathology; J. von Rotteck; A. Kast, Medicine.

The University Library contains 250,000 volumes. There are a chemical laboratory and institutions for the practical study of anatomy, pathology, physiology, &c., and medical, surgical, obstetric, and ophthalmic clinics.

UNIVERSITY OF GIESSEN.

THE Faculty of Medicine grants a degree in Medicine, Surgery, and Obstetrics, which can only be obtained on the following conditions:—

1. A *curriculum vitæ*, written by himself, must be sent to the Faculty by the candidate; also a certificate of gymnasial maturity, and a certificate of at least three years' medical and surgical study at a university or a medical institution. If the candidate be not a native of Germany, he must produce a certificate of sufficient preliminary studies from his own country. 2. The candidate must present a dissertation on some medical subject, written in German or Latin, together with a declaration in his own handwriting that the dissertation is his own composition; or a previously published treatise or literary production may be substituted. 3. The whole of the documents are laid before the Rector and the Chancellor. 4. If no objection be made, and the candidate have paid the promotion fees, the dissertation is judged by a referee; and, if he declares the work to be satisfactory, the candidate is admitted to *vivâ voce* examination. 5. This examination takes place in the German language, and lasts two or three hours. It is held in public, except when the candidate is advanced in age, or in a few other cases. 6. The examination embraces Anatomy, Physiology, Pathological Anatomy, Histology, Pathology, and Medicine, Materia Medica and Therapeutics (including Toxicology), Surgical Pathology and Surgery, Forensic Medicine, and Obstetrics. 7. Immediately after the conclusion of the examination, the result is decided on by the President and examiners, and at once made known to the candidate. The examination is not passed when two

or more members of the Faculty declare the result to have been unsatisfactory. The degree is granted either *cum laude*, *magnâ cum laude*, or *summâ cum laude*. 8. The approved dissertation must be printed and published, and the appointed number of copies be presented to the Faculty before the promotion takes place; except when the candidate has already handed in a printed treatise. 9. Promotions to M.D. *in absentiâ* do not take place at this University, except in the case of degrees granted *honoris causâ*, by the unanimous decision of the Faculty, to men who have rendered some great service to the science of medicine. 10. The fee for promotion is 440 *marks* (£22), which must be paid at the time of the petition for admission. If the candidate be not admitted to the verbal examination, 100 *marks* are retained. If the verbal examination be not passed, half the fees are forfeited; but, if the candidate present himself again, he has only to pay half the fees.

The following are the professors in the Faculty of Medicine in the University. *Ordinary Professors:* H. Bose, Surgery; J. Wilbrandt, Forensic Medicine and Hygiene; C. Eckhard, Physiology; F. Riegel, Medicine; M. Hofmeier, Obstetrics and Gynæcology; G. Pflug, Veterinary Medicine; F. W. von Hippel, Ophthalmic Surgery; C. Gæhtgens, Materia Medica; E. Boström, Pathological Anatomy. *Extraordinary Professors:* F. Birnbaum, Obstetrics; H. Steinbrügge, Otology; F. Eichbaum, Histology and Veterinary Medicine. Dr. L. Winckler teaches Veterinary Medicine.

The University Library contains 140,000 volumes. There are an academic hospital, with medical, surgical, and ophthalmic clinics, a lying-in institution, a chemical laboratory, a physiological, a pathological, and a pharmacological institute.

UNIVERSITY OF GOETTINGEN.

A DEGREE in Medicine, Surgery, and Obstetrics is granted under the following conditions:—

1. A written essay must be sent in on any medical subject chosen by the candidate. 2. If the essay be satisfactory, the student is admitted to a *vivâ voce* examination, which lasts a few hours, and is held in German or Latin, at the option of the candidate. 3. A fee of 439 *marks* (£21 19*s.*) must be paid to the Medical Faculty prior to examination. 4. The subjects of examination are Anatomy and Morbid Anatomy, Physiology, Pharmacology, General Pathology and Medicine, Surgical Pathology and Surgery, Toxicology, Medical Jurisprudence, and Obstetrics. If the candidate be successful, he receives a diploma, and promises to hold his academical honour with dignity.

The Medical Faculty of this University consists of the following professors, with private teachers. *Ordinary Professors:* F. S. Merkel, Anatomy; F. Wöhler, Chemistry; G. Meissner, Physiology; H. Schwartz, Midwifery and Diseases of Women; L. Meyer, Psychological Medicine; Th. Leber, Ophthalmic Surgery; W. Ebstein, Medicine; W. Marmé, Materia Medica; F. König, Surgery; J. Orth, Pathology; — Wolffhügel, Medical Chemistry and Hygiene. *Extraordinary Professors:* C. F. Lohmeyer, Surgery; J. Rosenbach, Surgery; W. Krause, Physiology; E. F. G. Herbst, Physiology; T. Husemann, Materia Medica and Toxicology; R. Deutschmann, Ophthalmic Surgery; O. Damsch, Medicine; K. Bürkner, Diseases of the Ear.

The following institutions are connected with the Medical Faculty: institutions for teaching animal and vegetable physiology and pharmacology, and pathology; the Ernst-August Hospital, with medical, surgical, and ophthalmic clinics; a lying-in hospital; a psychiatric clinic in the Lunatic Asylum; a chemical laboratory; and a veterinary institute.

UNIVERSITY OF GREIFSWALD.

THE Medical Faculty of this University consists of the following professors, with teachers. *Ordinary Professors:* J. Budge, Anatomy and Physiology; H. C. A. Pernice, Midwifery and Diseases of Women; F. Grohé, Pathological Anatomy; F. Mosler, Medicine; H. Helferich, Surgery; L. Landois, Physiology; R. Schirmer, Ophthalmic Surgery; H. Schulz, Materia Medica; F. Sommer, Anatomy; R. Grawitz, General Pathology and Pathological Anatomy. *Extraordinary Professors:* C. Eichstedt, Midwifery, Diseases of the Skin, and Syphilis; W. Häckermann, Forensic Medicine and Hygiene; R. Arndt, Psychology and Nervous Diseases; P. Krabler, Diseases of Children; F. Rinne, Surgery; the Baron von Preuschen von Liebenstein, Midwifery and Diseases of Women; A. Solger, Anatomy; F. Loeffler, Hygiene.

The University Hospital contains medical, surgical, ophthalmic, and obstetric clinics.

UNIVERSITY OF HALLE.

THE following are the regulations for the medical degree:—

1. Application for admission to examination must be made to the Dean, and at the same time must be presented:—(*a*) *curriculum vitæ*; (*b*) certificate of maturity from a gymnasium; (*c*) certificate of having passed a *tentamen physicum* at least two years previously; (*d*) certificates of having passed, in Universities, at least eight medical scholastic half-years. 2. On making application, 360 *marks* must be paid to the Dean for the examinations and the promotion, besides which 12 *marks* must be paid before the promotion to the Secretary of the University. 3. The examinations are held on two consecutive days by the regular professors of the Faculty. 4. After passing his examination, the candidate must compose a treatise on some subject in medical science, and deliver it to the Dean, together with theses to be publicly discussed, and the *curriculum vitæ*, for examination and approval; the same when printed (which must be done at the candidate's expense) must fill at least two quires. 5. The candidate has to request all the examiners personally to be present at the examination, likewise the members of the Faculty. 6. The candidate defends his treatise and the theses against two previously appointed opponents; after which those present are also called upon to join in the discussion. After the discussion is ended, the doctoral oath is administered, and the diploma delivered to the candidate. 7. Whoever fails to pass the examination, which includes all branches of medicine and surgery, receives back from the fees paid 40¼ *marks*. 8. The time for taking the degree is left to the candidate. He must not, however, exceed one year from the time of passing the examination to the taking of the degree, else he will have to submit to re-examination, and must pay again all the fees.

The following professors, with several private

teachers, constitute the Medical Faculty of this University. *Ordinary Professors:* L. Krahmer, Materia Medica and Forensic Medicine; Th. Weber, Medicine; Th. Ackermann, Pathology; H. Welcker, Anatomy; R. von Volkmann, Surgery; J. Bernstein, Physiology; A. Gräfe, Ophthalmic Surgery; E. Hitzig, Psychological Medicine; K. Eberth, Histology. *Extraordinary Professors:* H. Schwartze, Diseases of the Ear; E. Kohlschütter, Medicine; E. Harnack, Animal Chemistry and Biology; A. Seeligmüller, Diseases of the Nervous System; R. Pott, Diseases of the Skin; A. Genzmer, Surgery; B. Küssner, Medicine; M. Oberst, Surgery; E. Schwarz, Obstetrics.

The University library contains 100,000 volumes. Connected with the University are a chemical laboratory, a botanical garden, a zoological museum, an anatomical theatre and zootomical museum, a lying-in institution, a medico-chirurgical hospital, and physiological, pathological, and pharmaceutical laboratories.

UNIVERSITY OF HEIDELBERG.

THE following are the regulations to be observed for graduation in medicine in this University:—

1. No evidence of previous study is required. 2. The same demands are made of all candidates; the only difference is that the oral examination is shortened, if evidence be produced that the candidate has undergone the German Staats-Examen. 3. The subjects of examination are Anatomy, Physiology, Pathological Anatomy, Materia Medica (Pharmacognosis, Pharmacodynamics, and Toxicology), Medicine, Surgery, Midwifery, and Ophthalmic Surgery. 4. A candidate may select one of these as the principal subject of examination. All the other subjects then become secondary. 5. The examination is oral and written. The oral examination is conducted in the German language. 6. The written part of the examination consists of a medical dissertation in German or in Latin, or a scientific publication by the candidate, which must be given in before the oral examination. 7. The oral examination comprises the principal subject chosen by the candidate, and a certain number of the secondary subjects. If a State examination have been passed in the German Empire the candidate is examined in the principal subject, and in three of the secondary subjects, selected by himself; otherwise he is examined in five secondary subjects. Of these, three are fixed—Anatomy, Physiology, and Pathological Anatomy—the other two may be chosen by the candidate. 8. The candidate is examined on the principal subject for thirty minutes, on each secondary one for fifteen or twenty minutes. 9. On the result of the entire examination, three notes are granted: *summâ cum laude, insigni cum laude, cum laude.* 10. When the diploma is delivered to the candidate by the Dean, he has to give his hand in promise that he will bear his academical dignity with honour. 11. The cost of the examination, exclusive of that of the diploma, amounts in all to 444 *marks* (about £22 5*s.*), which must be paid before the commencement of the examination. Of this sum, if the oral examination be not passed, 179 *marks* (about £9) are returned.

The Medical Faculty consists of the following professors, with several teachers. *Ordinary Professors:* F. Kehrer, Midwifery; W. Delffs, Chemistry; C. Gegenbaur, Human and Comparative Anatomy; W. Kühne, Physiology; O. Becker, Ophthalmic Surgery; Th. von Dusch, Medicine; W. Erb, Medicine; J. Arnold, Pathology; V. Czerny, Surgery; C. Fürstner, Psychological Medicine. *Honorary Professor:* A. Nuhn, Human and Comparative Anatomy. *Extraordinary Professors:* H. Oppenheimer, Materia Medica; S. Moos, Diseases of the Ears; F. Knauff, Forensic Medicine and Hygiene; H. Lossen, Surgery; A. Weil, Medicine and Diseases of the Skin, and Syphilis; F. Schultze, Diseases of the Nervous System; A. Jurasz, Diseases of the Throat; G. Ruge, Anatomy; A. Ewald, Histology; J. Steiner, Physiology.

In connection with the University are a hospital, with medical, surgical, and ophthalmic clinics, an institution for diseases of the ear, a lying-in institution, anatomical, pathological, physiological, and zoological institutes, two chemical laboratories, and a botanical garden.

UNIVERSITY OF JENA.

THE Faculty of Medicine of this University grants a degree in Medicine, Surgery, and Obstetrics, the conditions for which are as follow:—

1. A certificate must be given as to the extent of medical studies, and the period of time which has elapsed since their completion (at least six terms). 2. Satisfactory evidence must be given as to character from the neighbouring head office of police. 3. Payment of examination and promotion fees must be made to the amount of 141 *thalers* (about £22). If the examination be not passed, the promotion fees and 52 *thalers* are returned. The examination is held in the German language only. It comprises all branches of medicine—viz., Anatomy, Physiology, Histology, General Pathology, Pathological Anatomy, Special Pathology, Medicine, Therapeutics, Surgery, Obstetrics, &c. When the examination is passed, the student has to give in a written essay on any subject of medical science, chosen by himself, written in German or in Latin. A dispensation from the Latin or German disputation may be granted, when the examination is very satisfactorily passed. After the essay is printed, and when the public disputation is over, the making out of the medical diploma takes place.

The Medical Faculty of this University is constituted as follows. *Ordinary Professors:* F. Ried, Surgery; H. Braun, Surgery; B. Schultze, Obstetrics; W. Müller, Pathology; W. Preyer, Physiology; M. J. Rossbach, Medicine; H. Kuhnt, Ophthalmology. *Honorary Professor:* M. Siedel, Materia Medica. *Extraordinary Professors:* P. Schillbach, Diseases of the Eye and Ear; C. Frommann, Physiology and Histology; C. Bardeleben, Anatomy; — Kessel, Diseases of the Ear; P. Fürbringer, Diseases of the Skin, and Syphilis; O. Küstner, Obstetrics and Gynæcology; G. Binswanger, Psychiatry; F. Krukenberg, Medical Chemistry.

Connected with the University are the Grand-Ducal hospital, lying-in institution, and lunatic asylum; anatomical, zoological, physiological, pathological, and chemical laboratories and museums, &c.

UNIVERSITY OF KIEL.

THE following are the conditions for obtaining the medical degree: 1, The presentation, on application, of (*a*) *curriculum vitæ*; (*b*) certificate of medical

studies; (*c*) a scientific treatise; 2, a written examination; 3, a verbal examination before the Faculty; 4, payment of 360 *marks*.

In this University the Medical Faculty consists of the following professors, with five private teachers. *Ordinary Professors:* R. Werth, Obstetrics and Gynæcology; F. von Esmarch, Surgery; H. Quincke, Medicine; V. Hensen, Physiology; A. Heller, Pathology; C. Völckers, Diseases of the Eye; W. Flemming, Anatomy. *Extraordinary Professors:* J. Bockendahl, Forensic Medicine; G. J. F. Edlessen, Medicine; F. Petersen, Surgery; A. Pansch, Anatomy; F. A. Falck, Materia Medica.

There are a medico-chirurgical hospital, containing medical, surgical, and ophthalmic clinics, a lying-in institution, and laboratories and museum in connection with the several subjects taught.

UNIVERSITY OF KOENIGSBERG.

The Medical Faculty of this University consists of the following professors, with several private teachers. *Ordinary Professors:* L. Hermann, Physiology; R. Dohrn, Obstetrics and Gynæcology; — Benecke, Anatomy; E. Neumann, Pathology; I. Mikulicz, Surgery; B. Naunyn, Medicine; J. Jacobson, Ophthalmic Surgery; M. Jaffe, Medical Chemistry. *Extraordinary Professors:* H. Bohn, Diseases of the Skin; A. W. Grünhagen, Histology; S. Samuel, Therapeutics; S. Pincus, Forensic Medicine; E. Berthold, Diseases of the Eye and Ear; F. R. A. Schneider, Surgery and Military Surgery; J. Caspary, Diseases of the Skin and Syphilis; J. Schreiber, Medicine; O. Langendorff, Physiology.

Connected with the University are anatomical, pathological, and physiological institutions, medical, surgical, obstetrical, and ophthalmic clinics; chemical and pharmaceutical laboratories, &c.

UNIVERSITY OF LEIPZIG.

The Medical Faculty of this University consists of the following professors and a number of private teachers. *Ordinary Professors:* F. Hofmann, Hygiene; E. L. Wagner, Medicine; — Credé, Midwifery; F. V. Birch-Hirschfeld, Pathological Anatomy; C. F. W. Ludwig, Physiology; C. Thiersch, Surgery; E. A. Coccius, Ophthalmic Surgery; W. His, Anatomy; C. W. Braune, Anatomy; P. Flechsig, Psychiatry; R. Boehm, Materia Medica; F. A. Hoffmann, Medicine; —Winkler, Chemistry. *Extraordinary Professors:* H. Sonnenkalb, Forensic Medicine and Hygiene; J. V. Carus, Zoology and Comparative Anatomy; A. Winter, Materia Medica; C. Henning, Obstetrics; C. H. Reclam, Forensic Medicine and Hygiene; B. G. Schmid, Surgery; E. F. Wenzel, Anatomy and Histology; J. L. C. Heubner, Medicine; E. R. Hagen, Otology; A. R. Brenner, Diseases of the Nervous System; E. Drechsel, Medical Chemistry; F. L. Hessel, Dental Surgery.

In connection with the University are chemical, physico-chemical, and pathologico-chemical laboratories; a zoological institute; an anatomical institute, under the direction of Professor His; a physiological institute, under Professor Ludwig; and various clinics, &c.

UNIVERSITY OF MARBURG.

Any one wishing to proceed to the medical degree at this University must send in to the Dean of the Faculty of Medicine the following: 1, a *curriculum vitæ*; 2, a certificate of scientific studies; 3, a certificate of at least four years' study at a recognised University or Medical College; a dissertation in the German language. If these be considered satisfactory, the candidate is admitted to a *vivâ voce* examination in the German language. If the examination be satisfactorily passed, the dissertation must be printed at the candidate's expense, and publicly defended. Three or four printed theses must also be sent in. The cost of the diploma is 330 *marks* (£16 10*s*.).

The following are the professors in the Medical Faculty of this University. *Ordinary Professors:* H. Nasse, Physiology; W. Roser, Surgery; F. Ahlfeld, Midwifery; — Gasser, Anatomy; F. Marchand, Pathology; E. Mannkopff, Medicine; H. Schmidt-Rimpler, Ophthalmology; H. Kramer, Psychology; E. E. Külz, Physiology; H. Meyer, Pharmacology. *Extraordinary Professors:* G. Wagener, Anatomy; H. Lahs, Midwifery; M. Rubner, Hygiene.

A hospital and various laboratories, &c., for practical instruction are connected with the University.

UNIVERSITY OF MUNICH.

In granting medical degrees at this University a distinction is made between those candidates who have already passed a State examination, and those who have not. From candidates who have already passed a satisfactory German examination nothing further is required in order to admit them to compete for the doctorate than the certificate of having passed such examination. The Faculty requires, however, the presentation of a dissertation, written in either the Latin or the German language. If the Faculty approve of it, it is printed at the expense of the candidate.

1. Candidates who have not passed the German State examination must present to the Medical Faculty the following:—*a*, a gymnasial certificate, or at least a certificate showing that the candidate has received a regular education; *b*, certificates of at least four years' attendance at a university or medical institution, and of attendance at lectures on the principal branches of Natural Science and Medicine; *c*, clinical certificates of the treatment of an internal, surgical, and eye complaint, and also assistance at a birth; *d*, a certificate of the performance of an operation on the dead body, and the application of a bandage. 2. The candidate must pass a two hours' verbal examination (in the German language) in Anatomy, Physiology, General Pathology, and Pathological Anatomy, Materia Medica, Therapeutics, Surgery, Midwifery, Hygiene, and Diseases of the Eye. 3. The candidate has also to present a dissertation. 4. The fees for examination and promotion amount, for both kinds of candidates, to 100 *thalers* (300 *marks*, 175 *florins*, £15).

The professorial staff of the Medical Faculty of this University is constituted as follows:—*Ordinary Professors:* F. X. von Gietl, Medicine; F. C. von Rothmund, Surgery and Clinical Surgery; A. Weismann, Zoology and Comparative Anatomy; F. Seitz, Materia Medica; L. A. Buchner, Pharmacy; M. von Pettenkofer, Hygiene; F. C. L. Winckel, Obstetrics and Gynæcology; J. N. von Nussbaum, Surgery and Clinical Surgery; A. von Rothmund, Ophthalmic Surgery; C. von Voit, Physiology; H. von Ziemssen, Medicine; C. Kupffer, Anatomy;

N. Rüdinger, Anatomy; O. Bollinger, Pathology. *Extraordinary Professors:* H. Ranke, Medicine; J. Amann, Midwifery; A. Martin, Forensic Medicine; J. Oertel, Laryngoscopy; J. Bauer, Medicine; O. Angerer, Surgery; H. Tappeiner, Medical Chemistry; K. Posselt; F. E. Bezold.

The University, which is situated in the Ludwig Strasse, contains a library consisting of 500,000 volumes. The chemical laboratory for Hygiene is under the direction of Professor von Pettenkofer.

UNIVERSITY OF ROSTOCK.

WHOEVER wishes to graduate in medicine at this University must apply to the Dean of the Medical Faculty, and deliver to him the following documents: 1, a certificate of having gone through the requisite course of studies in a university; 2, a certificate of examination, testifying to the ability of the candidate in the practice of medicine; 3, a treatise on any subject appertaining to medical science, composed by the candidate himself. A fee of 350 *marks* must be paid to the Faculty, of which two-thirds will be returned if the treatise be not deemed satisfactory. If proof of having passed a satisfactory examination in Germany be not given, the candidate is subjected to an examination, for which a sum of 200 *marks* must be paid. Only for special cases does the Faculty reserve a special form of examination. The inaugural dissertation must be the candidate's own, and he must append a written declaration to that effect. It is not, however, required that the work be composed entirely without assistance; but in this case the sources must be distinctly stated. After the dissertation has been stamped by the Dean in the name of the Faculty, it must be printed at the expense of the author, and at least 125 copies delivered to the Faculty. When the candidate has satisfactorily fulfilled the above conditions, he must introduce his essay, and read it publicly, and defend it. Promotions *in absentiâ* cannot be made, except only in the case of a *promotio honoris causâ* for distinguished service to medical science.

The Medical Faculty of this University consists of the following:—*Ordinary Professors:* T. Thierfelder, Medicine; H. R. Aubert, Physiology; W. von Zehender, Ophthalmology; F. Schatz, Obstetrics and Gynæcology; A. von Brunn, Anatomy; O. Nasse, Pharmacology; O. W. Madelung, Surgery; A. Thierfelder, Pathological Anatomy; P. Falkenberg, Botany. *Extraordinary Professor:* J. Uffelmann, Medicine.

UNIVERSITY OF STRASBURG.

THE following is an extract from the regulations of the University of Strasburg relative to Degrees in Medicine:—

Any person desirous of obtaining the degree of Doctor of Medicine can only be admitted to graduation on fulfilling the following conditions:—1. If he belong to the German Empire, he must have completed an academical four years' course of study of Medicine, or of the Natural Sciences. By a unanimous decision of the Faculty, one or two sessions may be omitted. Foreigners are not required to have passed through the four years' course if they produce proof of having received instruction equivalent to the course of study in a German Medical Faculty. 2. He must present a scientific essay composed by himself. 3. He must undergo the Faculty examination. 4. He must pay the prescribed fee of 240 *marks*. The examination consists, as a rule, of an oral examination in all important departments of medicine. If the candidate fail to give satisfaction, he must, in order to obtain the degree of doctor, again undergo the examination after a time to be determined by the Faculty, but he is not required to present a second dissertation. In the case of candidates who have passed the State examination, a colloquy before three members of the Faculty may be substituted for the oral examination. Degrees in Medicine are not conferred on absent candidates. If the dissertation be rejected, the whole fee is returned. If the dissertation be approved, but the candidate fail in the examination, 90 marks are returned to him; but when he is again admitted to examination, only half that fee is required. After the examination has taken place, and the dissertation has been printed and published, the candidate is formally admitted to the degree of Doctor by the issuing of a printed diploma. The candidate has to bear the expense of printing the dissertation and the diploma. There is no public ceremony, and no oath is administered.

Any one desirous of matriculating as a student, and attending the lectures and other instruction given in the University, must, on his arrival in Strasburg, communicate with the Secretary of the University in order to be inscribed. Other persons desirous of attending the lectures must obtain permission from the respective teachers, and must then communicate with the Secretary of the University.

The following are the professors and teachers of the University:—*Ordinary Professors:* G. Schwalbe, Anatomy; J. G. Jössel, Anatomy; F. L. Goltz, Physiology; F. Hoppe-Seyler, Physiological and Pathological Chemistry; O. Schmiedeberg, Pharmacology and Therapeutics; F. von Recklinghausen, Pathological Anatomy and Physiology; , Medicine; A. Lücke, Surgery; W. A. Freund, Obstetrics and Gynæcology; F. Wieger, Diseases of the Skin and Syphilis; A. Aubenas, Obstetrics and Gynæcology; F. Jolly, Psychiatry; L. Laqueur, Diseases of the Eye. *Extraordinary Professors:* G. Kohts, Medicine and Diseases of Children; A. Kuhn, Diseases of the Ear; E. Fischer, Surgery; J. Stilling, Ophthalmology; J. von Mering, Medicine; A. Wolff; R. Ewald. There are also several *Docenten.*

Connected with the University are institutions for the practical study of anatomy, experimental physiology, physiological chemistry, pathology, and pharmacology, and clinics for medicine, surgery, midwifery, mental diseases, diseases of the eye, and syphilis and diseases of the skin.

UNIVERSITY OF TÜBINGEN.

THE Faculty of Medicine here grants a degree in Medicine under the following conditions:—

1. The candidate must send in with his application—*a*, a *curriculum vitæ*; *b*, a certificate of having gone through a thorough course of instruction at the Gymnasium or some equivalent institution; *c*, proof of a sufficient study of medicine at a university, and certificates of having attended the lectures having reference to the subjects of examination. 2. The examination consists of a written and a subsequent verbal one. A legalised proof of having passed a satisfactory examination in medi-

cine and surgery in a foreign country dispenses with the written examination, but not with the verbal one. In no case can a degree be granted *in absentiâ*. 3. In the written examination one question will be put in each of the following subjects: 1. Anatomy; 2. Physiology; 3. Materia Medica; 4. General Pathology and Therapeutics; 5. Two questions in Special Pathology and Therapeutics. In addition to these, if a Doctor's degree in Surgery be required, one question will be put on each of the following subjects: 1. General Surgery; 2. Special Surgery; 3. Surgical Operations; 4. Midwifery. 5. The fees, including the printing of the diploma, amount to 300 *marks*, which must be paid on application. If the candidate be rejected at the written examination, and be not admitted to the verbal one, the whole of the fees are returned. If he be rejected after the verbal one, only half is returned. 6. The candidate must compose a dissertation, and get it printed; 250 copies are to be presented to the University. If, however, the essay be published either in a periodical or as a special pamphlet, 100 copies will suffice, but they must be provided with a special title-page. Only such candidates as have given numerous and satisfactory literary proofs of their capacity can be allowed to dispense with the composition.

The Medical Faculty of this University consists of the following professors, with private teachers:—*Ordinary Professors:* P. Grützner, Physiology; J. von Säxinger, Obstetrics and Gynæcology; C. von Liebermeister, Medicine; P. Bruns, Surgery; T. von Jürgensen, Materia Medica; A. Nagel, Ophthalmology; P. J. W. Henke, Anatomy; E. Ziegler, Pathology. *Extraordinary Professors:* O. Oesterlen, Forensic Medicine and Hygiene; A. Froriep, Anatomy; G. Schleich, Ophthalmology; H. Vierordt, Medicine; C. Nauwerk, Pathology; — Wagenhäuser, Aural Surgery.

A hospital and institutions for practical instruction are connected with this University.

UNIVERSITY OF WÜRZBURG.

Before being admitted to the examination for the Doctorate of Medicine, Surgery, and Midwifery, the candidate must show—by testimonials or certificates—that he is of good moral character, and that he has passed through four years' study at a University, six sessions of which must have been devoted to medical studies. Upon fulfilment of these conditions the candidate is admitted to a written and *vivâ voce* examination, before which he must pay to the Faculty 300 *marks* (£15). The written examination consists in the composition of an essay on some subject in theoretical or practical medicine, which must be handed to the Dean. It is customary for the dissertation to be printed. If the report on the essay be unfavourable, admission to the *vivâ voce* examination is denied, and another essay must be composed and handed in at a future time. Should the second essay, however, be deemed unsatisfactory, the candidate will not be allowed to reappear. He then receives back all his fees except 30 *marks*. If the dissertation be approved by the Faculty, the candidate is admitted to a *vivâ voce* examination in the German language in the following subjects:—Anatomy and Pathological Anatomy, Physiology, Pathology, and Medicine, Special Therapeutics, Surgery, Obstetrics, and Ophthalmology. A knowledge of Psychology and State Medicine is also required. After taking the examination oath, the result of the examination is communicated to the candidate by the Dean with the qualifying remarks, 'very good,' 'good,' or 'moderate.' When the candidate is unsuccessful at the *vivâ voce* examination he receives back half the fees, and is allowed to present himself for examination again in six months' time by paying half the fees again. Only one more trial is, however, allowed after the first rejection at the *vivâ voce* examination. After successful examination the candidate receives his diploma of doctor.

In this University the Medical Faculty consists of the following professors, with several *Docenten*:—*Ordinary Professors:* A. von Kölliker, Anatomy; F. W. Scanzoni von Lichtenfels, Midwifery; A. Fick, Physiology; W. O. Leube, Medicine; G. E. Rindfleisch, Pathology; J. Michel, Ophthalmic Surgery; A. Geigel, Medicine and Hygiene; H. Grashey, Psychiatry. *Extraordinary Professors:* A. von Tröltsch, Aural Surgery; W. Reubold, Forensic Medicine; A. Kunkel, Materia Medica; P. Stöhr, Anatomy; F. Riedinger, Surgery; K. Rieger, Psychological Medicine.

AUSTRO-HUNGARIAN EMPIRE.

GRADUATION IN MEDICINE.

The Universities of the Austro-Hungarian Empire which possess Medical Faculties and grant degrees in medicine are—Agram (Croatia), Gratz (Styria), Innsbrück (Tyrol), Cracow, Pesth (Hungary), Klausenburg (Hungary), Prague (Bohemia)—which has two medical faculties, German and Tschek—and Vienna.

All the Universities are under Government control, and the degree of Doctor of Medicine obtained at any of them alone gives the right to practise medicine in the Empire.

The course of study required of candidates for the degree of Doctor of Medicine in the Universities of the Austrian Empire extends over five years, or five winter and five summer terms or *semesters*. The following arrangement is recommended by the Government. (The first, third, fifth, seventh, and ninth are winter *semesters:* the others are summer *semesters.*) 1st *Semester:* Systematic Anatomy; Experimental Physics; Inorganic Chemistry; General Botany; Dissections. 2nd *Semester:* Systematic Anatomy (second part); Experimental Physics (second part); Organic Chemistry; Special Botany; Mineralogy; Practical Introduction to Chemical Analysis; Practical Introduction to the Use of the Microscope. 3rd *Semester:* Physiology; Histology; Medical Chemistry; Zoology; Dissections. 4th *Semester:* Physiology (second part); Embryology; Exercises in Physiology; in Histology; and in Medical Chemistry. 5th *Semester:* General Pathology and Therapeutics; Pharmacology; Pathological Anatomy; Pathological Histology; *Post mortem* Examinations; Practical Introduction to the Physical Examination of Patients. 6th *Semester:* Pathological Anatomy (second part); Special Pathology; Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; *Post mortem* Examinations; Exercises in Pathological Histology. 7th *Semester:* Special Pathology, Therapeutics, and Clinic of Internal Diseases; Special Surgical Pathology, Therapeutics, and Clinic; Diseases of the Eye; Exercises in Sur-

gical Anatomy (Operations). 8th *Semester:* Internal Diseases; Surgery or Diseases of the Eye; Surgical Operations; (Surgical Anatomy). 9th *Semester:* Internal Diseases; Surgery; Theory and Practice of Obstetrics and Gynæcology; Forensic Medicine; (Exercises in Obstetric Operations); Medico-Legal Exercises. 10th *Semester:* Clinics of Diseases of Children; of Diseases of the Skin, and of Syphilis; (Obstetrics and Gynæcology); Exercises in Obstetric Operations; (Medico-Legal Exercises). Of the subjects included in brackets, one course only is required, which may be attended in either a winter or a summer term, at the option of the student.

Candidates for the Degree of Doctor of Medicine are required to undergo three examinations (*rigorosen*). Before being admitted, the candidate must produce (*a*) his certificate of birth or baptism, and (*b*) evidence of having received a sufficient preliminary education in one of the institutions of the countries comprised in the Empire, or, if he do not belong to any of these, evidence of having matriculated as an ordinary student in a Faculty of Medicine; (*c*) evidence of having attended lectures in a medical school during at least four sessions, and of having dissected during two sessions; (*d*) of having passed, at one of the Universities of the Empire, three examinations, in Botany, Zoology, and Mineralogy. Before being admitted to the second examination he must produce evidence of having been engaged five years in professional study, and of having studied Clinical Medicine and Clinical Surgery, each during four sessions, and Clinical Ophthalmology and Clinical Midwifery, each during at least one session; and of having passed the first examination.

The first examination embraces Physics, Chemistry, Anatomy, and Physiology. There is a practical examination in Anatomy and Physiology, and a theoretical examination in all four subjects.

The second examination includes General Pathology and Therapeutics, Pathological Anatomy and Histology, Pharmacology (pharmacodynamics, toxicology, and prescribing), and the Pathology and Therapeutics of internal diseases. The candidate is examined practically in Pathological Anatomy (with preparations and on the dead body), and in Medicine (at the bedside); and theoretically in all the subjects.

The third examination embraces Surgery, Ophthalmic Surgery, Midwifery and Diseases of Women, and Forensic Medicine. The examinations in Surgery, Ophthalmic Surgery, and Midwifery are practical; and there are theoretical examinations in all the subjects.

All these examinations must take place at the same University. In very exceptional circumstances only is a candidate allowed to pass the second or third examination at another University than that at which he has passed the first.

The examinations are public, and are conducted by a president, the regular examiners, extraordinary examiners when required by the number of candidates, the Government commissioner; and at the second and third there is a co-examiner appointed by the Government. Each member of the commission examines for a quarter of an hour.

A candidate is not admitted to the theoretical examination unless he has satisfied the examiners in the practical one. If he fail at the practical examination, he may present himself again at the end of four months; if again rejected, four months must elapse before he can be again examined. A candidate rejected at the theoretical examination by one examiner only may be re-admitted to examination in the subject in which he is deficient, at the end of two months. If again rejected, he cannot be again examined in less than four months. If rejected at the theoretical examination by more than one examiner, he may reappear a second and third time at intervals of six months. A rejected candidate can, however, be examined a third time, either in practice or in theory, only with the sanction of the Minister of Public Instruction, and the consent of the College of Professors; and if he then fail, he is debarred henceforth from obtaining a degree in medicine in any of the Universities of the Empire.

The fee for the first examination is 55 florins, for the second 60 florins, and for the third 65 florins (Austrian). The promotion fees for the Doctorate amount to 60 Austrian florins. The total fee for the M.D. degree is about £23 of English money.

UNIVERSITY OF VIENNA.

IN this University the Medical Faculty is constituted as follows:—*Ordinary Professors:* C. Toldt and , Anatomy; E. von Brücke, Physiology; H. Kundrat, Pathological Anatomy; S. Stricker, General and Experimental Pathology; A. Vogl, Pharmacology; H. von Bamberger and H. Nothnagel, Internal Medicine; Th. Billroth and E. Albert, Surgery; C. von Stellwag and E. Fuchs, Ophthalmic Surgery; C. von Braun and A. Breisky, Midwifery and Gynæcology (for students); G. Braun, Midwifery (for midwives); H. Widerhofer, Diseases of Children; Th. Meynert, Psychiatry and Nervous Diseases; E. Hofmann, Forensic Medicine; E. Ludwig, Medical Chemistry. *Extraordinary Professors:* Th. Puschmann, History of Medicine; S. Schenk, Histology and Embryology; S. Exner and E. von Fleischl von Marxow, Physiology; S. von Basch, Experimental Pathology; A. Weichselbaum, Pathological Histology and Bacteriology; J. Seegen, Balneology; M. Benedikt, Electro-Therapeutics and Neuro-Pathology; S. Stern, Elementary Clinical Instruction; A. Drasche, Epidemiology; K. Störk and J. Schnitzler, Laryngology; L. von Schrötter, Laryngology and Internal Medicine; M. Rosenthal, Diseases of the Nervous System; E. von Staffella, Internal Medicine; L. Oser, Diseases of the Stomach and Intestines; W. Winternitz, Hydrotherapy; J. Weinlechner, F. Salzer, S. Hofmokl, and C. Böhm, Surgery; S. Ullzmann, Diseases of the Urinary Organs; A. Politzer, J. Gruber, and V. Urbantschitsch, Aural Surgery; A. von Reuss and L. Mauthner (the latter with the title of Ordinary Professor), Ophthalmic Surgery; R. Chrobak, C. von Rokitansky, and Bandl, Gynæcology; A. Monti, Diseases of Children; M. Kaposi, Dermatology; S. Neumann, Syphilis; R. von Krafft-Ebing and H. Obersteiner, Psychiatry; M. Gruber, Hygiene; J. Mauthner, Medical Chemistry; A. von Mosetig-Moorhof, Surgery; F. Müller, Veterinary Medicine. There are also about 75 *Privat-Docenten*, besides numerous adjuncts and assistants.

The General Hospital (*Allgemeines Krankenhaus*) is capable of accommodating about 2,000 patients. There are two medical clinics, under Professors Nothnagel and von Bamberger; two surgical clinics, one of which is under Professor Billroth; two clinics for Diseases of the Eye, under Professors von Stellwag and Fuchs; and three clinics for Obstetrics,

two for students being under the charge of Professors Carl Braun-Fernwald and Breisky, and one for Midwives under Professor Gustav Braun. The clinics for Diseases of Women are under the charge of Professors Braun-Fernwald and Breisky. There are also special clinics for Syphilis, under Professor Neumann; for Laryngoscopy, under Professors von Schrötter and Störk; for Diseases of Children, under Professor Widerhofer; for Psychology, under Professor Meynert; and for Otology under Professors J. Gruber and Politzer. A considerable portion of the school is also situated within the hospital: thus there are the Pathological Museum and *post mortem* room, under the direction of the Professor of Pathology; the room for medico-legal necropsies, under Professor Hofmann; the Institute for Experimental Pathology, under the direction of Professor Stricker; and the Institute of Chemical Pathology, under Professor Ludwig. The Anatomical Institute and Dissecting Room, under the direction of Professor Toldt and his colleague; the Physiological Institute, where Practical Physiology is carried on under Professor Brücke, the Materia Medica Museum and the Medical Library are outside the hospital, in the new University Building.

The great clinics on medicine, surgery, &c., are conducted during the two sessions—from the middle of October to the middle of March, and from the middle of April to the end of July. They are under the immediate direction of the Professors of the Medical Faculty, and constitute, of course, an essential part of the curriculum of study for the ordinary Austrian student.

The special courses of instruction are most numerous during the regular academical sessions, but there are always some going on, even in August and September. They last usually from four to eight weeks. The courses are given for the most part by the private lecturers and the professors' assistants, and the material for them is derived from the wards of the clinical professors. For a six or eight weeks' course, the fee is usually from fifteen to twenty florins. The instruction in them is demonstrative or practical, involving the use of instruments and apparatus by the students themselves.

Vienna affords great opportunities for the study of pathological anatomy. These are separate *post mortem* rooms for the cases from the clinical wards, medico-legal cases, and the ordinary cases. At the two former the clinical professor or assistant is usually in attendance. The examinations go on all the morning, there being sometimes as many as a dozen in one day.

Besides the General Hospital, Vienna possesses the Wieden Hospital (600 beds), the Rudolf Hospital (*K. K. Krankenhaus Rudolfstiftung*) (860 beds), the Lunatic Ayslum, the General Polyclinic or Dispensary, the Lying-in Hospital, the Leopoldstädt Children's Hospital (90 beds), the Crown Prince Rudolf Children's Hospital (40 beds), St. Joseph's Children's Hospital at Wieden (100 beds), St. Anne's Children's Hospital (100 beds), &c.

UNIVERSITY OF CRACOW.

The Medical Faculty of this University consists of the following professors, with several *Docenten*:—*Ordinary Professors:* E. Korczynski, Medicine; L. Teichmann, Descriptive Anatomy; M. Madurowicz von Jelita, Midwifery and Gynæcology; S. Janikowski, Forensic Medicine; L. Rydel, Ophthalmic Surgery; A. Stopczanski, Medical Chemistry; A. Adamkiewicz, Pathology; L. Blumenstock, Forensic Medicine; T. Browicz, Pathological Anatomy; N. Cybulski, Physiology; A. Rosner, Dermatology and Syphilis; Dr. Rydygier, Surgery. *Extraordinary Professors:* J. Oettinger, History of Medicine; M. L. Jakubowski, Diseases of Children; S. Domanski, Diseases of the Nervous System; J. Lazarski, Pharmacology; A. Obalinski, Surgery; S. Parenski, Medicine. There are also several *Privat-Docenten* and assistants.

UNIVERSITY OF GRATZ.

In this University the Medical Faculty consists of the following professors, with about twelve *Docenten*: *Ordinary Professors:* A. Schauenstein, Forensic Medicine; E. Zuckerkandl, Anatomy; A. Wölfler, Surgery; G. von Helly, Midwifery and Gynæcology; A. Rollett, Physiology and Histology; I. Schnabel, Ophthalmic Surgery; O. Rembold, Medicine; J. Eppinger, Pathological Anatomy; C. von Schroff, Materia Medica and Therapeutics; C. B. Hoffmann, Medical Chemistry; V. von Ebner, Histology and Embryology; —— Psychiatry; R. Klemensiewicz, Pathology and Therapeutics. *Extraordinary Professors:* J. von Koch, Epidemic Diseases and Sanitary Police; E. Lipp, Diseases of the Skin; E. Borner, Obstetrics and Gynæcology; R. R. Jaksch von Wartenhost, Diseases of Children.

Connected with the University are anatomical, physiological, pathological, and zoological institutes: medical, surgical, ophthalmic, obstetric, and gynæcological clinics; a laboratory for physiological and pathological chemistry; a chemical laboratory, &c. The hospitals are the general hospital (700 beds), a lying-in hospital (120 beds), the town hospital (80 beds), a children's hospital (80 beds), and two infirmaries (245 beds).

UNIVERSITY OF INNSBRÜCK.

The following professors belong to the Medical Faculty:—*Ordinary Professors:* A. von Tschurtschenthaler, Materia Medica and Therapeutics; M. Holl, Anatomy; E. Ehrendorfer, Obstetrics and Gynæcology; J. Moeller, General Pathology and Pharmacology; M. von Vintschgau, Physiology; F. Schott, Pathological Anatomy; C. Nicoladoni, Surgery; P. von Rokitansky, Medicine; W. Löbisch, Medical Chemistry. *Extraordinary Professors:* F. Wildner, Veterinary Medicine; J. Oellacher, Histology and Embryology; E. Lang, Syphilology and Dermatology.

The ordinary laboratories, clinics, and other means of practical instruction are possessed by this University. There are a general hospital (204 beds) and a lying-in hospital (130 beds).

UNIVERSITY OF PRAGUE.

The Medical Faculty of this University consists of the following professors, with several *Docenten*:—*Ordinary Professors:* A. Pribram, Medicine; C. Gussenbauer, Surgery; H. Sattler, Ophthalmic Surgery; Ph. Knoll, Pathology; J. Maschka, State Medicine; O. Kahler, Medicine; E. Hering, Physiology; F. Weber von Ebenhof, Midwifery; C. H. Huppert, Medical Chemistry; — Schauta, Obstetrics and Gynæcology; H. Chiari, Pathology; F. Hofmeister, Pharmacology; C. Rabl, Anatomy; A.

Pick, Psychiatry; S. Mayer, Physiology. *Extraordinary Professors:* J. Lerch, Chemistry; F. Ganghofner, Diseases of Children; P. J. Pick, Skin Diseases and Syphilis; E. Zaufal, Aural Surgery; C. Weil, Surgery; A. Epstein, Diseases of Children; J. Soyka, Hygiene; W. Biedermann, Physiology; J. Janosik, Histology and Embryology; A. Schenkl, Ophthalmic Surgery; — von Jirus, Pharmacology; K. Pawlik, Midwifery and Gynæcology.

Connected with the University are an anatomical theatre; pathological, physiological, medico-chemical, and zoo-chemical institutes; medical, surgical, ophthalmic, and dermatological clinics; obstetric clinics for practitioners and for midwives, &c. The hospitals are the General Hospital (948 beds), with the affiliated Hospital of the Bohemian Sisters (220 beds), the Franz-Josef Children's Hospital (100 beds), the Israelite General Hospital (52 beds), the Hospital of the Brothers of Mercy (166 beds), the Hospital of the Elizabethan Sisters (60 beds), the Public Lunatic Asylum (1,348 beds), the Lying-in Hospital (322 beds for mothers and 176 for children).

UNIVERSITY OF BUDA-PESTH.

THE Medical Faculty consists of sixteen ordinary and four extraordinary professors. Among the former are Drs. Lenhossek, Anatomy; Wagner and Korángi, Internal Medicine; Kovacs and Lumnitzer, Surgery; Scheuthauer, Pathological Anatomy; Mihalcovics, Topographical Anatomy and Histology; Schulek, Ophthalmology; Kezmarszki, Midwifery; Agtai, Forensic Medicine; Fodor, Hygiene; Tendrassik, Physiology; Schwimmer, Dermatology.

SWITZERLAND.

GRADUATION IN MEDICINE.

IN Switzerland degrees in Medicine are granted in the Universities of Basle, Berne, Geneva, and Zürich. These degrees do not confer a licence to practise, for which a separate examination is required.

UNIVERSITY OF BASLE.

THE degree of Doctor of Medicine, Surgery, and Midwifery, granted by this University, can only be obtained under the following conditions:—

1. Application for admission to the examination must be made to the Dean of the Faculty in writing, enclosing: (*a*) *curriculum vitæ*; (*b*) matriculation at the University; (*c*) certificates of attendance at the academical lectures; (*d*) a certificate of conduct from the High School in which the candidate has made his principal studies; (*e*) a scientific treatise on any subject in medical or natural science. 2. The examination is partly written (*tentamen*) and partly verbal (*rigorosum*). 3. The written examination consists in the answering of five questions in Anatomy, Physiology, Pathology, Medicine, and Surgery. 4. In case of rejection, the Faculty can appoint a time for a repetition of the examination. 5. All the professors of the Faculty are invited to the verbal examination, The following are the subjects: Anatomy, Physiology, Pathology, Medicine, Materia Medica, Surgery, and Midwifery. 6. The examination by one examiner must not last longer than half an hour. 7. The degrees in which doctorships are granted are *Summâ cum laude*, *Insigni cum laude*, *Magnâ cum laude*, *Cum laude*, and *Rite*. 8. In adjudicating on both the written and the verbal examination, not only will the special knowledge in the respective branches be taken into consideration, but also the possession of general scientific knowledge, and especially a comprehensive knowledge of Natural Science. 9. One hundred and twenty copies of the treatise must be delivered to the Faculty. 10. Promotions are not granted to applicants who have not passed the examinations here, but the Faculty can confer the degree of Doctor *honoris causâ*. 11. The fees for the examination amount to 350 *francs*—viz., 100 for the *tentamen*, 200 for the *rigorosum*, and 50 for the promotion. 12. If the candidate be rejected after either examination, he forfeits the fees. The re-examination is free of charge.

The following are professors in the Medical Faculty of this University:—*Ordinary Professors:* F. Miescher (senior), Pathological Anatomy; L. Rütimeyer, Comparative Anatomy and Zoology; A. Socin, Surgery; H. Immermann, Medicine; J. Kollmann, Anatomy; J. J. Bischoff, Obstetrics and Gynæcology; F. Miescher (junior), Physiology; M. Roth, Pathology; L. Wille, Psychiatry; H. Schiess, Ophthalmic Surgery. *Extraordinary Professors:* I. Hoppe, Therapeutics; E. Hagenbach-Burckhardt, Diseases of Children; R. Massini, Polyclinic and Prescribing; M. Gottschau, Anatomy; G. Bunge, Physiology and Pathology. There are also several private teachers.

Connected with the University are the town hospital, where clinics for medicine, surgery, diseases of the eye, mental diseases, and midwifery are conducted; a hospital for diseases of children, and institutions for practical instruction in physiology, pathology, chemistry, and botany.

UNIVERSITY OF BERNE.

BEFORE admission to examination for the degree in Medicine and Surgery, the candidate must submit to the Faculty of Medicine a manuscript dissertation of scientific value. If this be accepted, he must, after producing evidence of general, scientific, and medical education, be examined *vivâ voce* in Anatomy, Physiology, Pathological Anatomy, Legal Medicine, General Pathology and Medicine, Surgical Pathology and Surgery, Materia Medica, and Ophthalmology.

The Medical Faculty of this University is constituted of the following professors and about thirteen *Docenten*:—*Ordinary Professors:* C. Emmert, Forensic Medicine and Hygiene; T. Kocher, Surgery; T. Langhans, Pathological Anatomy; — Sahli, Medicine; P. Müller, Obstetrics and Gynæcology; A. Vogt, Hygiene; E. Pflüger, Ophthalmic Surgery; M. von Nencki, Physiological Chemistry; H. Kronecker, Physiology; R. Demme, Pharmacology and Diseases of Children. *Extraordinary Professors:* E. Schärer, Psychiatry; A. Valentin, Aural Surgery. There are several private teachers.

Medical, surgical, obstetric, and special clinics, and physiological, pathological, and clinical laboratories, &c., are connected with the University.

UNIVERSITY OF GENEVA.

THE University of Geneva grants the degrees of Bachelor in Medical Science and Doctor of Medicine.

The following classes of persons are admitted as students in the Faculty of Medicine: 1. Bachelors

in Letters; 2. Bachelors in Science; 3. Students who have attended during two years lectures in the Section of Philosophy, and have undergone the examinations at the end of each year; 4. Pupils from the Classical Section of the Gymnasium, with certificates of Studies; 5. Swiss and foreigners who give evidence of their studies by means of diplomas or certificates; 6. Persons who undergo satisfactory oral examinations, in the subjects comprehended in the classical section of the Gymnasium; 7. Persons who furnish evidence that they have studied abroad, for a year at least in a corresponding faculty, may be inscribed in the Faculty of Medicine.

The course of study is as follows: *First Year: Winter Session:* Botany (first part); Physics (first part); Comparative Anatomy or Zoology; Inorganic Chemistry; Practical Comparative Anatomy. *Summer Session:* Botany (second part); Physics (second part); Comparative Anatomy or Zoology; Organic Chemistry (first part); Practical Chemistry; Botanical Excursions. *Second Year: Winter Session:* Descriptive Anatomy (first part); Physiology (first part); Organic Chemistry (second part); Dissections. *Summer Session:* Descriptive Anatomy (second part); Physiology (second part); Practical Chemistry and Practical Comparative Anatomy. (Students are recommended to attend, in addition, courses of other subjects, such as Astronomy, Geography, Physics, Mineralogy, Geology, &c.) *Third Year: Winter Session:* Descriptive Anatomy (third part); Normal Histology; Dissection. *Summer Session:* Regional Anatomy; Embryogeny. Supplementary courses on subjects of the preceding years, on which the student's knowledge is weak; Practical Physiology, Histology, Comparative Anatomy, and Chemistry. (The examination for Bachelor in Medical Sciences is now undergone.) *Fourth Year: Winter Session:* General Pathology; Internal Pathology; External Pathology; Dissection of Regions; Medical and Surgical Hospital Practice. *Summer Session:* Special Pathological Anatomy; Pathological Histology; Internal Pathology; External Pathology; Pharmacology; Medical and Surgical Hospital Practice; Exercises in the Laboratory of Pathological Histology. *Fifth Year: Winter Session:* Therapeutics; Hygiene; Legal Medicine; Theory of Obstetrics; Internal Pathology; External Pathology and Operations; Medical and Surgical Hospital Practice. *Summer Session:* Therapeutics; Legal Medicine; Internal Pathology; External Pathology; Medical and Surgical Hospital Practice; Operations. *Sixth Year: Winter and Summer Sessions:* Medical, Surgical, and Obstetrical Hospital Practice; Polyclinic; Ophthalmology; Psychology, &c. Repetitions preparatory to the examination for the Doctorate.

Persons who have complied with the conditions laid down regarding the admission of students to the Faculty of Medicine may become candidates for the degree of Bachelor in Medical Science. Students who have undergone the recognised annual examinations in the Faculty of Medicine or of Sciences are exempt from oral examination in the subjects in which they have already been examined; provided that the examinations have been undergone not more than two years previously. Persons who produce diplomas or certificates giving evidence of their studies may be exempted from further examinations in the subjects in which they have already passed.

The following may become candidates for the degree of Doctor of Medicine: 1. Bachelors in Medical Science; 2. Persons who produce diplomas or certificates indicating that they have gone through an equivalent course of study. There are five examinations for the degree of Doctor of Medicine. *First Examination:* Human Anatomy and Histology; Physiology; Pathological Anatomy and General Pathology; a Necropsy, for which one hour is allowed; making an Anatomical Preparation for which four hours are allowed. *Second Examination:* Medicine; Surgery; Operative Surgery; three Operations and Application of Bandages. *Third Examination:* Hygiene; Therapeutics; Materia Medica and Pharmacology; Legal Medicine; a Medico-Legal Report on a real or supposed case, for which one hour is allowed. *Fourth Examination:* Clinical Examination of two medical and two surgical patients and of one case of labour (fifteen minutes being allowed for each case); Obstetrics, with operations on the mannikin; Discussion on each Clinical Case; Written Commentary on a Medical and a Surgical Case, two hours being allowed. *Fifth Examination:* Defence of a Printed Dissertation, in the French language, on a subject in medical science chosen by the candidate, and previously communicated to the Faculty.

The examinations are public. Those for the degree of Bachelor are held at the beginning and end of the university year, and in the interval between the sessions. Application for admission must be made to the Dean of Faculty of Medicine eight days before the day of examination. The examinations for the degree of Doctor take place, on the demand of the candidates, at times determined by the Faculty.

Before being admitted to examination, each candidate pays to the beadle 40 *francs*; and after the last examination, 100 *francs* must be paid to the Faculty of Medicine. In case of unsatisfactory examination, half the first fee is returned, and the second is not paid.

The professorial staff consists of the following:—*Ordinary Professors:* S. L. Laskowski, Anatomy; M. Schiff, Physiology; F. W. Zahn, Pathology; L. Revilliod, Clinical Medicine; G. Julliard, Clinical Surgery; A. H. Vaucher, Clinical Obstetrics and Gynæcology; M. Olivet, Psychiatry; F. Vuilliet, Polyclinic; A. D'Espine, Medicine; J. L. Reverdin, Surgery and Practical Surgery; J. L. Prevost, Therapeutics; P. L. Dunant, Hygiene. *Supplementary Professors:* — Eternod, Histology; — Jentzer, Obstetrics; A. Reverdin, Surgery; H. Oltramare, Venereal Diseases.

UNIVERSITY OF ZÜRICH.

The following are the regulations for the degree of Doctor of Medicine:—

1. In order to obtain the degree of Doctor of Medicine the candidate must send to the Dean a written memorial, accompanied by (*a*) evidence of attendance on lectures of Physics, Chemistry, Botany, Zoology, and Medical Subjects; (*b*) a dissertation on some subject in medical science, which, after approval, the candidate must have printed at his own expense.

2. The dissertation is delivered by the Dean for examination to the teacher of the subject of which it treats, or to the member of the Faculty at whose suggestion it has been composed. A recommendatory opinion of the first examiner decides its acceptance.

If the first opinion be doubtful or unfavourable, the thesis must be circulated among all the members of the Faculty, and is accepted if two-thirds give their written votes in its favour.

3. When the dissertation is approved, the candidate is admitted to examination. The first part is written, and the candidate has to answer two questions drawn by lot, one on Anatomy and Physiology, the other on Pathology and Therapeutics, Surgery or Midwifery. The answers are circulated among the members of the Faculty, who, after examining them, express in writing their determination (by a simple majority) whether the candidate shall be admitted to the oral examination. This examination comprises the above-named subjects, and also General Anatomy, Pathological Anatomy, Materia Medica, and Ophthalmic Medicine. The votes of two-thirds of the members of the Faculty present are necessary for the passing of this examination.

4. After the examination has been passed and two hundred printed copies of the dissertation have been delivered, an official diploma is delivered in duplicate to the candidate.

5. The fee consists of 350 *francs* (£14), and 15 *francs* to the beadle; it is paid before the oral examination (if this be remitted, before graduation). There is no additional fee if it be necessary to repeat the examination. The fee is not returned if the candidate be definitively rejected. The sum of 100 *francs* is remitted to candidates who already possess a recognised diploma; and, in such cases, the Faculty may, by a majority of two-thirds, agree to omit the oral examination.

6. The Faculty has the power of granting the diploma of Doctor *honoris causâ* for distinguished services to medicine.

The Medical Faculty consists of the following Professors, with several *Docenten*:—*Ordinary Professors:* H. von Meyer, Human Anatomy; H. Frey, Comparative Anatomy and Histology; U. Krönlein, Surgery; J. Gaulé, Physiology; E. Klebs, Pathology; E. Eichhorst, Medicine; O. Haab, Ophthalmic Surgery; O. Wyss, Medicine; E. Frankenhäuser, Obstetrics and Gynæcology; A. Forel, Psychiatry. *Extraordinary Professors:* H. Spondly, Obstetric Medicine; J. Billeter, Medicine; F. Gott, Materia Medica.

THE LICENCE TO PRACTISE MEDICINE.

THE following are the regulations for the licence to practise medicine in Switzerland. One licensing body examines at Geneva, and the other at Basle, Berne, and Zürich; both have the same regulations, and grant the licence to practise in all parts of the republic:—

There are two examinations, preliminary and final. At Geneva candidates are admitted to the preliminary examination on producing one of the following certificates:—1. Bachelier ès Lettres; 2. Bachelier ès Sciences; 3. Certificates of having passed two examinations in the Section of Philosophy at Geneva, and of having previously taken not less than twenty hours per week of studies; 4. Certificates of studies at the Classical Section of the Gymnasium at Geneva; 5. Certificates of foreign studies equivalent to those named above. At the Amalgamated Board of Basle, Berne, and Zürich, candidates must produce evidence of complete and satisfactory studies in a public school; and of attendance on courses of Anatomy, Chemistry, Physics, Physiology, Practical Physiology, and six months' work in a Chemical Laboratory.

The examination is practical and oral. The practical part comprises Anatomy and Histology. The oral examination comprises Botany, Zoology, and Comparative Anatomy, Physics, Chemistry, Anatomy and Histology, and Physiology. At Geneva candidates who have passed this examination are entitled to the designation of Bachelor of Medical Science.

In order to be admitted to the Final Examination for the Licence, candidates at Geneva must produce the certificate of Bachelor of Medical Science, and diplomas and certificates obtained after equivalent studies and examinations elsewhere. At the other Board they must produce evidence of having passed the Preliminary Examination, and of having attended the following academic courses:—Pathological Anatomy, Medicine, Practical Surgery and Bandaging (six months), Clinical Medicine and Clinical Surgery (each three sessions), Clinical Midwifery (two sessions), and Clinical Ophthalmic Medicine (one session).

The examination is written, practical, and oral. The written and practical parts consist of—1. Examination of two Medical and two Surgical cases, one Ophthalmic case, and one of Midwifery, in the presence of two examiners; 2. Written opinion of one of two Medical and two Surgical cases; 3. A *post mortem* examination and opinion on the same; 4. Performance of two operations—one the ligature of an artery, the other according to the judgment of the examiners; 5. Written Examination on Forensic Medicine and Hygiene. The *vivâ voce* examination comprises: 1. Physiology; 2. General Pathology and Pathological Anatomy; 3. Special Pathology (Medicine) and Therapeutics; 4. Pharmacology; 5. Surgery; 6. Ophthalmology; 7. Obstetrics and Gynæcology; 8. Hygiene and Forensic Medicine.

DENMARK.

MEDICAL EDUCATION AND GRADUATION.

THE study of Medicine at the University of Copenhagen is open to any student who has matriculated there or in foreign Universities; but only Danish subjects can obtain through examination the right to practise as medical men in the country.

The course of study lasts six or seven years. It is divided into three parts—namely, an introductory and two principal courses.

1. The introductory part consists of Botany (with especial regard to medicinal plants), Physics, Zoology, and Chemistry, theoretical and practical. The student has to submit to a preliminary examination on these subjects, and he can then enter as a pupil at one of the hospitals, where he must attend in a fixed order, and for a certain time, in the various wards.

2. The second course comprises Anatomy, Physiology, Pharmacology, and Dissections, in which the student has to submit to an examination.

3. The final course consists of the following: Theoretical Surgery, Clinical Surgery, Operative Surgery, Theory of Medicine, Clinical Medicine, Pathological Anatomy, General Pathology, Forensic

Medicine, and Obstetric Medicine. The student is examined on these subjects, and has to present a written thesis in Medicine, and one on Surgery. Before the student can pass his examination in this concluding course, he must present a certificate showing that he has gone through a half-yearly clinical course of study under the chief physicians at the hospital in Surgery, Medicine, Skin Diseases, and Syphilis; and a shorter course at the Lying-in Institution in Obstetrics and Diseases of Children.

When these examinations are passed, the obligatory course of study is concluded by a residence at the Lying-in Institution, in order to obtain a practical knowledge of operations in cases of abnormal labour. The candidate who has passed his examination has now a right to practise medicine; but the majority of candidates, before commencing to practise, endeavour to obtain an appointment at one of the hospitals, where they do duty during two years in a subordinate position. The entire course of study generally covers a period of from six to seven years.

In order to obtain the degree of Doctor of Medicine, the candidate has to prepare and submit to the Medical Faculty a treatise on a medical subject chosen by himself. If it be accepted by the Faculty, it is printed, and must be defended by the author publicly at the University, when at least two professors of the Medical Faculty appear as opponents.

Among other means for aiding the labours of the student at the University are: The Botanical Gardens, a Zoological Museum, a Chemical Laboratory, a Collection of Physical Instruments, an Anatomical Museum, Dissecting Rooms (Physiological Collection and Laboratory), Pharmacological Collection, Collection of Surgical Instruments, Pathological Museum, the Copenhagen Hospitals, and the Lying-in Institution. A Bacteriological Laboratory, under the direction of Dr. Salomonsen, has been established in Copenhagen.

No entrance fees are demanded, and all the lectures are free to the students. The fees payable in respect of the several examinations amount in all to 60 *kroner* (about £3 10*s*.). The expenses in connection with obtaining the degree of Doctor of Medicine amount to 160 *kroner* (about £9).

SWEDEN.

MEDICAL EDUCATION.

There are three medical institutions in Sweden which confer licences to practise, namely, the Universities of Upsala and Lund, and the Karolina Medico-Chirurgical Institute or Academy of Medicine in Stockholm. The Universities also confer the degree of Doctor of Medicine. A Medical School, with professors of the various branches of medical science, is connected with each.

The three institutions possess museums of normal and pathological anatomy, collections of chemical and pharmaceutical preparations and drugs, of surgical and obstetric instruments, physiological and pathological laboratories, &c.

Upsala possesses a hospital of 150 beds, which is entirely at the disposal of the University for the purpose of clinical teaching. The professors of medicine and surgery are *ex officio* medical officers of the hospital. Of the 150 beds, 100 or a few more are generally occupied, and are divided among medical, surgical, syphilitic, and obstetric cases.

At Lund, clinical instruction is given in the State Hospital and also in the University Hospital. In the latter, there are 80 beds for medical and 80 for surgical cases, with 67 beds in the syphilitic and 8 in the obstetric departments. Of these, 40 beds in the medical and 40 in the surgical department are appropriated to clinical instruction. The obstetric department is also clinical. Clinical instruction in the diseases of the eye is also given.

In Stockholm, the pupils of the Karolina Institution receive clinical instruction at the Seraphim Hospital, the Children's and Lying-in Hospitals, the Town and State Lock Hospital, and the Lunatic Asylum at Konradsberg.

At the Seraphim Hospital there are two medical and two surgical wards, under the charge of the ordinary and adjunct professors of medicine and surgery; and also a small gynæcological ward. The Hospital contains about 300 beds. An ophthalmic clinic is comprised in the surgical department; and the gynæcological clinic is attached to the medical.

The Lying-in Hospital or Obstetric Clinic can accommodate 30 patients; 20 beds are generally occupied. The professor of obstetrics in the Karolina Institution is *ex officio* chief physician.

The whole of the cases in the General Orphan Hospital are available for clinical instruction. The daily number of infants under one year old in the institution is from 100 to 200; sometimes it has been as high as 240. Of these, 10 or 12 per cent. are generally on the sick-list. There are also about 80 children between one and fifteen years of age. In addition, from 1,600 to 2,000 are attended yearly as out-patients. Clinical instruction is given by the professor of diseases of children for eight months in the year, and four months by his adjunct.

The Town and State Lock Hospital has 180 beds, of which, on an average, 140 are occupied daily.

The Hospital for the Insane at Konradsberg has 220 beds which are all available for clinical instruction. The professor of psychological medicine in the Karolina institute is the chief physician.

LICENCE AND DEGREE IN MEDICINE.

No one can practise Medicine in Sweden who has not obtained a Licence from one of the three Boards. The examinations for the Licence consist of two parts. The first, for the Diploma of Candidate in Medicine, embraces Anatomy, Histology, Physiology, Embryology, Medical Chemistry, Pharmacology, Toxicology, General Pathology, and History of Medicine. The candidate must, after passing the maturity examination on leaving a lyceum, have undergone a preliminary (medico-philosophical) examination in Botany, Zoology, Chemistry, and Physics, or have passed an examination as candidate in Philosophy. He must also have followed the practical laboratory courses of Chemistry, Physiology, and normal and morbid Anatomy. The examination for the Licence comprises Medicine, Diseases of the Skin and Syphilis, Diseases of Children, Surgery, Obstetrics and Gynæcology, Psychiatry, Pathological Anatomy, and Forensic Medicine. The candidate must have passed the examination for candidate in Medicine, and must subsequently have attended the clinics of Medicine, Surgery, Obstetric Medicine, Diseases of Children

Syphilis, and Diseases of the Mind; and must have obtained a competent knowledge of Pharmacy. Attendance on oral lectures is not obligatory.

The degree of Doctor of Medicine is conferred by the Universities of Lund and Upsala on Licentiates of those Universities and of the Academy at Stockholm on their presenting and defending a thesis. Attendance on lectures is obligatory for the degree.

NORWAY.

MEDICAL EDUCATION.

IN the University of Christiania, which is the only School of Medicine in Norway, lectures are delivered on the following subjects: Surgery, Ophthalmic Surgery, Physiology, Midwifery, and Diseases of Women and Children, Descriptive Anatomy, Forensic Medicine, Pathology, and Therapeutics, Hygiene, Materia Medica, General Pathology and Pathological Anatomy, Surgical Pathology, Zoology, and Chemistry. Clinical instruction is given in the General Hospital on Surgery, Ophthalmic Surgery, Medicine, Diseases of the Skin and Syphilis; at the Lying-in and Children's Hospital, on the Diseases of Women and Children; at the Ganstead Asylum and at the Christiania Lunatic Asylum, on Mental Diseases; and in the Town Hospital, on Chronic Diseases. Practical instruction is also given in Chemistry, Anatomy, and Botany.

LICENCE AND DEGREE.

Before entering on the study of Medicine, the candidate has to pass two preliminary examinations; one in Arts, including Norwegian, Latin, Greek, French, German, English, Mathematics, Geography, and History; and one in Philosophy, including Geology, Zoology, Botany, Astronomy, and the elements of Chemistry and Physics. Having passed these, he is admitted to matriculation, and afterwards studies Medicine for nearly seven years.

There are three professional examinations. The first is held two and a half years after matriculation, in Anatomy, Dissections, the use of the Microscope, Physiology, and Medical Physics. The second, held three and a half years after the first, includes Pharmacology, Toxicology, Medicine, Therapeutics, General Pathology, Pathological Anatomy, Surgery, Operative Surgery, Obstetrics and Gynæcology, Diseases of Children, Forensic Medicine, Hygiene, and a practical examination in Medicine and Surgery. Practical work in the hospital wards is also obligatory.

On passing the final examination, the candidate becomes a Physician, and obtains the right to practise. To obtain the degree of Doctor, he must pass a further examination, and defend a thesis.

HOLLAND.

MEDICAL EDUCATION AND GRADUATION.

THE degree of Doctor of Medicine is granted in Holland by the Universities of Leyden, Groningen, and Utrecht, and the Communal University of Amsterdam.

In each of the four towns there are a hospital, and laboratories of Physics, Chemistry, Botany, Zoology, Anatomy, Physiology, Experimental Pathology, and Pharmacy; and, in Amsterdam, laboratories of Hygiene and Pathological Anatomy.

A candidate for admission as student of Medicine must have passed one of the following examinations: 1, a Literary and Mathematical Examination (Mathematics, Dutch, French, German, and Elementary Latin); 2, an Examination for admission to a University (Mathematics, Dutch, Latin, and Greek); or, 3, he must have gone through in a satisfactory manner the classes of a Latin school (Mathematics, Geography, History, Latin, Greek, Dutch, French, German, and English). Those only who belong to classes 2 and 3 are admissible to the degree of Doctor of Medicine.

In the University, the following three examinations have to be passed—the first two years after entrance, and the others at further intervals of two years: 1, Botany, Zoology, Chemistry, and Physics; 2, Anatomy, Physiology, Histology, Pharmacology, and General Pathology; 3, Internal Pathology, Surgery, Obstetrics, Pathological Anatomy, Pharmacodynamics, and Hygiene. The candidate must also present a thesis.

The Faculty grants the degree of Doctor of Medicine to those who have passed the three examinations, and who have shown, at the time of admission, that they possess a competent knowledge of Latin and Greek. The degree does not confer a right to practise.

STATE EXAMINATION.

This examination is conducted by eight professors, appointed annually and paid by the Government. The applicant for admission must be a Doctor of Medicine of some University, or possess a certificate of gymnasial maturity, or pass a preliminary literary and philosophical examination. The course of medical study must extend over at least six terms. The medical examination includes General and Special Pathology, Pharmacology, Morbid Anatomy, Medical Jurisprudence, Clinical Medicine, Clinical Surgery, and Obstetrics.

BELGIUM.

GRADUATION IN MEDICINE.

DEREES in Medicine are granted by the Universities of Brussels, Ghent, Liège, and Louvain. The degrees, when legalised by a Government commission, give the right of practice in Belgium. The Universities of Brussels and Louvain confer also honorary titles, without licence to practise.

The examinations for the Degree of Doctor of Medicine are alike in the four Universities. 1. An examination in Natural Science must be passed before the Faculty of Science; it comprises Chemistry, Physics, Botany, Zoology, elements of Mineralogy and Geology, Logic, Psychology, and Moral Philosophy (all oral), and Practical Chemistry. This examination may be passed either entire or in two divisions. 2. An examination for candidates in Medicine must be passed, either entire or in two divisions, before the Faculty of Medicine; it comprises Descriptive Anatomy, Histology, Physiology, including Embryology, Ele-

ments of Comparative Anatomy, and Materia Medica, with Dissections and Practical Histology. 3. There are three further examinations for the Doctorate: *a.* an examination (entire or in two divisions) in Medicine, General Therapeutics and Pathology, Pathological Anatomy, Hygiene, and Practical Pathological Histology; *b.* an examination in Surgery, including Ophthalmic Surgery, Obstetrics, and Forensic Medicine; *c.* a clinical examination in Medicine, Surgery, and Midwifery, and a practical examination in Regional Anatomy and Operative Surgery.

The total duration of study is seven years. The law, however, only requires that the student shall have attended hospital practice for three years.

Every student, at the beginning of the year, takes out an inscription, for which he pays 15 *francs*. For the courses required for each of the five examinations a fee of 200 *francs* is paid. The examination fees are: for the first two examinations, each 40 *francs*; for each of the three examinations for the doctorate, 80 *francs*.

UNIVERSITY OF BRUSSELS.

Degree for Foreign Practitioners.

By the regulations of the University of Brussels, British and other medical practitioners, provided with proper qualifications, are admitted to examination before the Faculty for the degree of M.D. Residence is not required from such as are unable to absent themselves long by reason of their professional occupations.

Candidates must come in person and have their names inscribed in the books of the University. The fees are: for inscription of name, 215 fr. (£8 12*s*.); for examination, 315 fr. (£12 12*s*.); for registration of diploma, 10 fr. (8*s*.); total, 540 fr. (£22 12*s*.). The examination consists of three parts. 1. General Therapeutics, including Pharmacodynamics (proportion of doses), special Pathology and Therapeutics of Internal Diseases, General Pathology, and Pathological Anatomy. 2. Surgical Pathology, Ophthalmic Surgery, Theory of Midwifery, Public and Private Hygiene, Medical Jurisprudence. Examination at the Hospital of one or two patients under Medical and Surgical Treatment; Examination in Midwifery, consisting in Obstetrical Operations on the mannikin; Examination in Operative Surgery, consisting of some of the usual operations on the dead subject, such as amputation, ligature of an artery, &c.

Great importance is attached to practical knowledge, but candidates must also prove that they possess positive theoretical science.

The examinations take place on the first Tuesday in November, December, February, May, and June, and are conducted *vivâ voce*. Candidates are requested to attend at the University at the latest at 2 P.M. on the day preceding the examination for the purpose of paying their fees and depositing their diplomas.

The three examinations may be got through in a week, allowing a day's interval between each two tests. Saturday is the most eligible day for arriving for candidates for whom time is an object. The delay of a week is, however, never exceeded by more than a day or two.

The examinations are conducted in English, through the medium of an interpreter, for such candidates as are not familiar with the French language. Most of the examiners, however, speak English well.

UNIVERSITY OF LOUVAIN.

The degree of M.D. may also be obtained from this University without residence or preliminary examination in Arts, by foreigners who have already a University degree in their own country, or who are able to satisfy the medical faculty as to the genuineness and value of their diplomas. The examination, which is a severe one, is conducted in French, no interpreter being allowed. It embraces all the subjects required at Brussels, and is written as well as *vivâ voce*. The candidate must also present one or two theses, which have to be publicly defended. The fee is about £22. This examination does not give a right to practise in Belgium, to obtain which additional tests must be passed, and residence at Louvain is also necessary.

RUSSIA.

GRADUATION IN MEDICINE.

Degrees in Medicine are granted by eight universities in Russia; namely, those of Moscow, Kieff, Kasan, Charkoff, Odessa, Warsaw, Dorpat, and Helsingfors; also by the Medico-Chirurgical Academy of St. Petersburg. Students are admitted after having gone through an eight years' course of instruction in a gymnasium, and having passed the *Abiturienten-Examen*. The ordinary age for commencing medical studies is 19.

The course of medical study extends over five years. The mode of instruction and the regulations are nearly alike in the several universities. The session usually begins on Sept. 1, and terminates at the end of May. The remaining three months constitute the vacation. The course of study is as follows:—

First Year: Descriptive Anatomy, with Dissections; Inorganic Chemistry; Experimental Physics; Botany; Mineralogy; and Zoology.

Second Year: Descriptive Anatomy, with Dissections; Physiology; Histology; Comparative Anatomy; Organic and Practical Chemistry; Botany; Materia Medica; and Experimental Physics.

Third Year: Pathological Anatomy and Histology, with necropsies; General Therapeutics; Auscultation and Percussion; Chemical and Microscopic Examination of Secretions and Excretions; Special Pathology and Therapeutics (Medicine); Surgical Pathology, Dislocations, and Bandaging; Diseases of the Nervous System.

Fourth Year: Clinical Medicine; Clinical Surgery; Operative Surgery and Topographic Anatomy; Gynæcology and Obstetrics; Diseases of Children; Diseases of the Skin; Venereal Diseases; Diseases of the Eye and Ear; Hygiene; Forensic Medicine and Toxicology.

Fifth Year: Clinical Medicine; Clinical Surgery; Clinical Gynæcology and Obstetric Operations; Clinical Courses of Diseases of Children; Venereal Diseases; Diseases of the Eye and Mental Diseases; *post mortem* examinations.

At the end of each year the student has to undergo an examination in the subjects to which he has attended during the year; and at the end of the fifth year there is a final examination in all the subjects of the curriculum, except Natural History.

Having passed this examination, the candidate receives his diploma, which entitles him to practise in any part of the Russian Empire. There is no State examination. The examinations are public, and the examiners are the professors of the various subjects.

Two diplomas are granted. One corresponds to the title of physician or practitioner, which is granted after the above-mentioned examinations have been passed, and gives the right to practise. For the degree of Doctor of Medicine, the candidate must undergo, two years later, a further examination, and write and defend a thesis on a subject chosen by himself.

ITALY.

GRADUATION IN MEDICINE.

THE Italian Universities at which degrees in Medicine are granted are the Royal Universities of Bologna, Cagliari, Catania, Genoa, Messina, Modena, Naples, Padua, Palermo, Pavia, Parma, Pisa, Rome, Sassari, Siena, and Turin; the free Universities of Camerino, Perugia, and Ferrara, and the Royal Institute for Superior Studies at Florence.

The regulations for graduation in medicine in the Universities of Italy are as follow :—

1. The Medico-Chirurgical Faculty has the duty of giving instruction in all subjects relating to medicine and surgery, promoting the cultivation of all that is known in that field, and qualifying for the exercise of the medical profession in its various branches. 2. The course of medical and surgical study extends over six years, at the end of which full licence to practise is granted. 3. The following courses of instruction are obligatory :—General Chemistry, Organic and Inorganic; Botany; Zoology, with Comparative Anatomy and Physiology; Experimental Physics; Normal Human Anatomy (*i.e.* Histology, Descriptive and Topographic Anatomy, and Dissection); Human Physiology; General Pathology; Pathological Anatomy (demonstrations and exercises); Materia Medica and Experimental Pharmacology; Special Medical Pathology (or Principles and Practice of Medicine); Special Surgical Pathology (Surgery); Clinical Medicine and Exercises in Semeiotics; Clinical and Operative Surgery; Theory and Practice of Ophthalmic Surgery; Theory and Practice of Diseases of the Skin and Syphilis; Midwifery and Clinical Midwifery; Forensic Medicine and Public Hygiene; Theoretical and Clinical Psychiatry (where opportunities exist). 4. The obligatory courses must each be attended one year; except Pathological Anatomy, of which two years are required, and Human Anatomy and Clinical Medicine and Surgery, each three years. 5. The following courses are non-obligatory or complementary:—Medical Chemistry, Experimental Toxicology, Critical History of Medicine. 6. Besides these, other free courses may also be given. 7. There are three biennial examinations in the Faculty of Medicine—the first for 'promotion,' the second for 'licence,' the third for the degree of 'laureate,' with a diploma conferring full licence to practise. 8. In the Universities of Pisa and Siena the licentiate has the title of laureate of the first stage (*laurea di primo grado*). 9. In order to be admitted to the first examination (*promozione*) the candidate must have been a student at the University at least two years, and have diligently attended the course of Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, Experimental Physics, Human Anatomy, and any subjects of instruction that he may choose, so as to make up eighteen hours of instruction per week. 10. The subjects of instruction are Chemistry, Botany, Zoology, Comparative Anatomy and Physiology, and Experimental Physics. The Examining Board consists of the official teachers of the subjects of examination, with one or two additional examiners not belonging to the teaching body. On the proposal of the Faculty, and with the consent of the Minister, the examination for promotion may be divided into two parts—one to be held at the end of the first year, and the other at the end of the second year. At the beginning of each scholastic year the Faculty determines what courses are to be followed, and when. 11. The candidate for admission to the several examinations (Licence) must have passed the first examination, have attended the University during two other years, and have diligently attended courses of Human Anatomy and Physiology, General Pathology, Practical Pathological Anatomy, Materia Medica and Experimental Pharmacology, Special Medical Pathology, Special Surgical Pathology, Clinical Medicine, and Clinical Surgery. 12. The Examining Board is constituted as in Section 10. The examination is oral, and practical as regards Human Anatomy and Materia Medica. 13. A candidate for admission to the third examination (*laurea*) must have passed the second examination, have subsequently been a student at the University during two years, and have diligently attended the courses of Clinical Dermatology and Syphilology, Clinical Ophthalmic Surgery, Midwifery and Clinical Midwifery, Clinical Psychiatry, Exercises in Pathological Anatomy, Clinical Medicine and Surgery, Operative Surgery, Forensic Medicine and Hygiene, and voluntary courses, so as to make up eighteen hours of instruction each week. 14. The candidate has to undergo an examination on the dead body and two clinical examinations. 15. The examination on the dead body is conducted by a sub-committee consisting of all the professors of Operative Surgery, Pathological Anatomy, and Forensic Medicine, with one or two assessors not belonging to the official teaching body. 16. In this examination, the candidate performs on the dead body a surgical operation, the nature of which is decided by lot. He also performs a necropsy, and draws up a description of the appearances seen. Finally, he answers the questions put to him by the examiners, and especially on the results of the necropsy, which are asked by the professor of Forensic Medicine. 17. The first clinical examination is conducted in the presence of a sub-committee consisting of the professors of Clinical Dermatology and Syphilology, Clinical Obstetrics, Clinical Psychiatry, Clinical Ophthalmology, and Forensic Medicine, with one or two extra-professorial assessors. 18. In this examination, the candidate examines four cases of disease selected from the four special classes which have not previously been examined or treated in the clinical wards, and gives his opinion on the diagnosis, prognosis, and treatment. He afterwards answers the questions and observations of the examiners, and especially replies to the questions put by the professor of Forensic Medicine on the obstetric and psychological cases. 19. The second clinical examination is conducted in the presence of a sub-committee,

consisting of the Professors of Clinical Medicine, Clinical Surgery, Medicine, Surgery, and Forensic Medicine, with one or two extra-professorial assessors. 20. The candidate examines in the presence of the sub-committee four patients, two medical and two surgical, who have not yet been examined or treated in the wards, and writes a description of the cases. He finally answers the questions asked by the examiners. 21. A student must have passed each stage of the third examination before he can be admitted to the next stage. 22. In each examination, a student rejected in one subject alone may present himself for examination in this subject only on a future occasion; but if he be rejected in two or more subjects, the whole examination must be repeated. 23. The three stages of the third examination having been passed, a committee judges of the merits of the candidates, and the successful candidates are declared Doctors in Medicine and Surgery.

Foreigners desirous of obtaining medical degrees in Italian Universities must produce a diploma or degree obtained at some recognised foreign University, and satisfactory proof that they have actually gone through all the studies and passed the examinations required for the same. They must also pass the ordinary examinations for the medical degree, and pay the fees. The examinations are usually conducted in the Italian or the Latin language.

*UNITED STATES OF AMERICA.**

INSTITUTIONS GRANTING DEGREES.

THE United States possess a very large number of institutions empowered by charter to grant the degree of Doctor of Medicine: these being in some instances special colleges and schools of medicine and surgery, and in others the medical departments of universities. The subjoined is a list of them There are also several 'eclectic' and homœopathic colleges, which are not included in the list.

Alabama.—Medical College of Alabama (Mobile).

Arkansas.—Medical Department of Arkansas Industrial University (Little Rock).

California.—Cooper Medical College (San Francisco); Medical Department of the University of California (San Francisco): Faculty of Medicine of the University of Southern California (Los Angeles).

Colorado.—Medical Department of the University of Denver; Medical Department of the University of Colorado (Boulder): Medical Department of the Rocky Mountain University (Gross Medical College, Denver).

Connecticut.—Medical Department of Yale College (New Haven).

District of Columbia.—National Medical College, Columbian University (Washington): Medical Department of the University of Georgetown (Washington): Medical Department of Howard University (Washington): Medical Department of National University (Washington).

Florida.—Medical Department of the University of Florida (Tallahassee).

Georgia.—Medical College of Georgia (Augusta): Atlanta Medical College: Southern Medical College (Atlanta).

Illinois.—Rush Medical College (Chicago): Chicago Medical College: Women's Medical College (Chicago): College of Physicians and Surgeons of Chicago: State Board of Health of Illinois: Quincy College of Medicine.

Indiana.—Physio-Medical College of Indiana (Indianapolis): Medical College of Indiana (Indianapolis): Central College of Physicians and Surgeons (Indianapolis): Fort Wayne College of Medicine.

Iowa.—College of Physicians and Surgeons (Keokuk): Medical Department of the State University (Iowa City): College of Physicians and Surgeons of Iowa (Des Moines).

Kansas.—Medical Department of the University of Kansas (Lawrence).

Kentucky.—Medical Department of the University of Louisville: Kentucky School of Medicine (Louisville): Louisville Medical College: Hospital College of Medicine (Louisville).

Louisiana.—Medical Department of Tulane University (New Orleans).

Maine.—Medical School of Maine at Bowdoin College (Brunswick).

Maryland.—School of Medicine of the University of Maryland (Baltimore): College of Physicians and Surgeons (Baltimore): Baltimore Medical College: Women's Medical College (Baltimore): Baltimore University School of Medicine: John Hopkins University (Baltimore).

Massachusetts.—Medical Department of Harvard University (Boston): College of Physicians and Surgeons (Boston).

Michigan.—Department of Medicine and Surgery, University of Michigan (Ann Arbor): Detroit College of Medicine (Detroit).

Minnesota.—Minnesota Hospital College (Minneapolis): Medical Department of the University of Minnesota (Minneapolis): St. Paul Medical College (St. Paul).

Missouri.—State Board of Health of Missouri (St. Louis): Medical School of the University of Missouri (Columbia): Missouri Medical College (St. Louis): St. Louis Medical College: Kansas City Medical College: St. Louis College of Physicians and Surgeons: North-Western Medical College of St. Joseph: Medical Department of the University of Kansas: St. Joseph Medical College: Kansas City Hospital College of Medicine.

Nebraska.—Omaha Medical College: College of Medicine of the University of Nebraska (Lincoln).

New Hampshire.—Medical Department of Dartmouth College (Hanover).

New Jersey.—Medical Society of New Jersey.

New York.—College of Physicians and Surgeons of the City of New York: Albany Medical College: Medical Department of the University of the City of New York: Medical Department of the University of Buffalo: Long Island College Hospital (Brooklyn): Bellevue Hospital Medical College (New York): College of Medicine of Syracuse University: Women's Medical College (New York): Medical Department of Niagara University (Buffalo).

North Carolina.—Medical Department of Shaw University (Raleigh).

Ohio.—Medical College of Ohio (Cincinnati): Columbus Medical College: Starling Medical College (Columbus): Medical Department of the Western Reserve University (Cleveland): Cincinnati College of Medicine and Surgery: Miami Medical College (Cincinnati): Medical Department of the University of Wooster (Cleveland): Columbus Medical College:

* For much information regarding medical education and practice in the United States of America we are indebted to the publications of the State Board of Health of Illinois.

Toledo Medical College: North-Western Ohio Medical College (Toledo).

Oregon.—Medical Department of the Willamette University (Portland).

Pennsylvania.—Medical Department of the University of Pennsylvania (Philadelphia): Jefferson Medical College (Philadelphia): Women's Medical College (Philadelphia): Medico-Chirurgical College of Philadelphia.

South Carolina.—Medical College of the State of South Carolina (Charleston).

Tennessee.—Medical Department of the University of Nashville and Vanderbilt University (Nashville): Mehany Medical Department of Central Tennessee College (Nashville): Nashville Medical College, Medical Department of the University of Tennessee: Memphis Hospital Medical College.

Vermont.—Medical Department of the University of Vermont (Burlington).

Virginia.—Medical Department of the University of Virginia (Charlottesville): Medical College of Virginia (Richmond).

The laws regulating the practice of medicine vary in the different States. The following is an outline of the laws of each State and Territory :—

Alabama.—Diplomas of Medical Colleges confer no right to practise. Licences are granted after examination by the Board of Censors of the Medical Association of the State, and the Board of Censors of the Medical Societies (43 in number) affiliated to the Association.

Arizona (Territory).—Diplomas of regularly organised medical colleges are recognised and registered.

Arkansas.—Authorisation to practise is granted after examination by County Boards. Candidates rejected by County Boards may be examined by State Boards, and receive licence if found qualified. Licences are registered, and qualify for practice throughout the State.

California.—A Board of Examiners issues certificates to holders of genuine diplomas, and examines candidates for practice who are not graduates or licentiates.

Colorado.—The State Board of Medical Examiners grants licences to graduates after examination of their diplomas, and to other persons after an examination in medical science and practice.

Connecticut.—No law for recognition of diplomas or for examination. Itinerant practitioners are licensed.

Columbia (District).—The Medical Society of the District of Columbia grants licences after examination, or the production of a diploma from a recognised medical college or Board of Examiners.

Florida.—Boards of Medical Examiners examine and grant licences to persons not possessing diplomas.

Georgia.—Authorisation to practise is granted to holders of diplomas from incorporated medical colleges, medical schools, or universities. Practitioners must be registered in the county in which they practise.

Illinois.—The State Board of Health examines diplomas of persons desiring licence to practise, and issues certificates to those whose certificates are genuine. Other persons receive licence after examination by the Board. Certificates are registered in the counties in which the holders reside.

Indiana.—No law regulating qualifications. Practitioners of medicine are registered in the counties in which they reside.

Iowa.—No regulation as to recognition of qualifications. Cities may regulate, licence, and tax itinerant practitioners.

Kansas.—The regulations are generally similar to those of California.

Kentucky.—A Board of Medical Examiners in each judicial district examines applicants and grants certificates dated for not more than five years. Diplomas of Universities, &c., are apparently not legally recognised.

Louisiana.—Degrees of Doctor of Medicine from a recognised institution in America or Europe are recognised and certified by the State Board of Health. No provision for examination of candidates for registration.

Maine.—No law regulating medical practice.

Maryland.—No Act regulating medical practice.

Massachusetts.—No law regulating medical practice.

Michigan.—Graduates of legally authorised institutions in the United States or in other countries are registered.

Minnesota.—The Faculty of the Medical Department of the University of Minnesota examines diplomas of applicants for permission to practise, and recognises them if genuine, and examines other candidates for practice. Certificates are registered by county clerks.

Mississippi.—All candidates for practice must be examined and licensed by Boards of Censors, of which one is appointed for each congressional district. Diplomas are not recognised as qualifications. Licences to practise are registered in counties.

Missouri.—Degrees in Medicine are examined and verified by the State Board of Health. Persons not holding diplomas are examined by the Board. All certificates of Board are registered in the counties in which the holders reside.

Nebraska.—Graduates of medical colleges and persons licensed after examination by medical boards of other States are entitled to registration in their respective counties. No provision for ascertaining genuineness of diplomas.

Nevada.—Diplomas of chartered medical schools are recognised and registered in counties.

New Hampshire.—Boards of Censors elected by duly organised medical societies in the State grant licences to holders of satisfactory diplomas, and to other persons after examination.

New Jersey.—Graduates of medical colleges of universities of good standing, or medical societies authorised to grant diplomas, or persons legally qualified in other States, are entitled to be registered as practitioners in the counties in which they reside.

New Mexico (Territory).—A Board of Medical Examiners examines diplomas as to their genuineness, and examines persons not holders of diplomas. Certificates are registered in counties.

New York.—All qualifications must be registered in the counties where the practitioners reside. Diplomas of other States are examined, and, if approved, endorsed by an incorporated medical institution within this State. The degree of Doctor of Medicine granted within this State is a qualification to practise, when duly registered.

North Carolina.—A Board of Medical Examiners examines all applicants for licence to practise.

Ohio.—Persons are prohibited from practising who

do not possess a degree from a School of Medicine in the United States or in a foreign country, or a certificate of qualification of a State or county medical society.

Oregon.—No law for regulating practice of medicine.

Pennsylvania.—Diplomas of legally chartered universities are recognised, on presentation to the protonotary of each county, and registration by him.

Rhode Island.—No regulations as to qualifications.

South Carolina.—Diplomas and qualifications are admitted, on being exhibited to the Faculty of some incorporated college or the Medical Board of the State, and, on approval, registered.

Tennessee.—There are no laws regulating the practice of medicine.

Texas.—Boards of Medical Examiners grant certificates of qualification, after examination. Certificates must be registered in counties.

Vermont.—Boards of Censors appointed by organised medical societies examine diplomas and recognise them if approved, and examine candidates not having diplomas ; and grant certificates of authorisation to practise.

Virginia.—All medical practitioners must be licensed.

West Virginia.—The State Board of Health issues certificates of qualification to holders of diplomas of reputable colleges, and examines and licenses others.

Wisconsin.—Professional privileges are granted only to persons who have a diploma of some incorporated medical society or college, or who are admitted to practise after examination by a State or county medical Society.

Wyoming (Territory).—No person is allowed to practise without a diploma from a chartered medical school, to be registered in the county where the holder resides.

UNIVERSITY OF PENNSYLVANIA.

The Medical Department of this University is the oldest medical school in America, having been established in 1765 on the model of the University of Edinburgh. The following are the professors of the faculty as at present constituted :—Dr. W. Pepper, Provost of the University and *ex officio* President of the Faculty ; Dr. H. H. Smith (Surgery—*Emeritus*) ; Dr. Joseph Leidy (Anatomy) ; Dr. Richard A. F. Penrose (Obstetrics and Diseases of Women and Children) ; Dr. William Osler (Theory and Practice of Medicine, and Clinical Medicine) ; Dr. D. Hayes Agnew (Surgery and Clinical Surgery) ; Dr. William Pepper (Clinical Medicine) ; Dr. William Goodell (Clinical Gynæcology) ; Dr. James Tyson (General Pathology and Morbid Anatomy) ; Dr. Horatio C. Wood (Materia Medica, Pharmacy, and General Therapeutics) ; Dr. Theodore G. Wormley (Chemistry) ; Dr. John Ashhurst, jun. (Clinical Surgery) ; Dr. E. T. Reichert (Physiology) ; also the following clinical professors of special subjects :—Dr. W. F. Norris (Diseases of the Eye) ; Dr. G. Strawbridge (Diseases of the Ear) ; Dr. L. A. Duhring (Diseases of the Skin) ; Dr. L. Starr (Diseases of Children) ; Dr. E. T. Bruen (Physical Diagnosis).

The curriculum is arranged as follows :—*First Year:* Anatomy, Histology, Materia Medica and Pharmacy, General Chemistry, Physiology, General Pathology, General Clinics—Medical and Surgical. Final Examinations in General Chemistry, Materia Medica, and Pharmacy. *Second Year:* Anatomy, Topographical Anatomy, Medical Chemistry, Physiology, General Pathology, and Morbid Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, General Clinics—Medical and Surgical. Final Examinations in Anatomy, Medical Chemistry, and Physiology. *Third Year:* General Pathology and Morbid Anatomy, Topographical Anatomy, Therapeutics, Theory and Practice of Medicine, Surgery, Obstetrics, Operative Surgery, Minor Surgery and Bandaging, Diseases of Women and Children ; Gynæcology, Bedside Instruction in Practical Medicine (including Physical Diagnosis), Bedside Instruction in Practical Surgery, Practical Ophthalmology, Practical Otology, Practical Dermatology, Practical Electro-Therapeutics, General Clinics—Medical and Surgical. Special Clinics (Nervous Diseases, Diseases of Skin, Eye, Ear, Diseases of Women and Children). Final examinations for Degree at the end of the course. General Pathology and Morbid Anatomy, Therapeutics, Theory, and Practice of Medicine, Surgery, Obstetrics, and Diseases of Women and Children.

Candidates for admission must have a collegiate degree, or a certificate of having passed the matriculation examination of a recognised college ; or a certificate, covering the required subjects, from a recognised normal or high school, or from a duly organised county medical society that has instituted a preliminary examination ; or a preliminary examination embracing, first, a brief essay which will serve as a test of qualifications in orthography and grammar ; second, an examination in the elementary principles of physics, on the subjects considered in Part I. of Fownes's Chemistry.

The Faculty have established a post-graduate course, which embraces various special departments. The teaching consists in bedside and dispensary lessons, the treatment, examination of patients, and the use of instruments of precision in the diagnosis and treatment of disease.

The Laboratory Building is a spacious edifice of four floors : the first being devoted to operative dentistry ; the second and third are fitted up as chemical laboratories ; while the fourth contains apartments for physiological, histological, and pathological investigation. There are also a pharmaceutical laboratory, and one of experimental therapeutics.

During the first and second years, much of the student's time is occupied with practical work in the various laboratories of chemistry, pharmacy, osteology, histology and pathological histology, and in dissection ; but throughout the second and third sessions he is required to attend the general medical and surgical clinics at the University and Philadelphia hospitals, while special clinical facilities are provided for the third year. In this year, each student receives bedside instruction in clinical medicine and surgery, in physical diagnosis, and in gynæcology. Opportunities are afforded for the practical study of diseases of the eye, ear, throat, and skin, and for acquiring proficiency in the use of the various instruments employed in their treatment. For this purpose the third-year class is divided into sections of convenient size, each of which receives direct personal instruction in the various practical subjects above mentioned. Advanced students may make original researches in the laboratories of pharmacy, chemistry, physiology, pathology, and experimental therapeutics.

Students who have attended one course in a

regular medical school (homœopathic and 'eclectic' schools are not recognised) will be admitted as students of the second course in the University, after having satisfactorily passed an examination in General Chemistry and Materia Medica and Pharmacy. Students who have attended two courses in a regular medical school will be admitted as students of the third course after having satisfactorily passed an examination in General and Medical Chemistry, Materia Medica and Pharmacy, Anatomy, and Physiology. Graduates of other regular medical schools of good standing will be admitted as students of the third course without an examination. Graduates of Colleges of Pharmacy and Dental Colleges in good standing are admitted to the second course without an examination.

The candidate for the degree of Doctor of Medicine must have attained the age of twenty-one years, and be of good moral character. He must have studied medicine for three years, and have attended at least his last course of instruction in this school, have prepared a satisfactory thesis, and have passed the required examinations. Candidates who have not been successful upon a first examination will be permitted to have a second before the June commencement. The commencement for conferring the degree of Doctor of Medicine is held on the 15th day of March, unless that day should fall on a Saturday or Sunday, when it is held on the preceding Friday. The degree will not be conferred upon a candidate who absents himself from the public commencement, except by special permission of the Medical Faculty.

The entire College expenses for the three years' course is 455 dollars, including matriculation and graduation fees.

HARVARD UNIVERSITY, BOSTON.

THE Medical Faculty of this University is constituted as follows: Dr. C. W. Eliot, *President:* Dr. Oliver W. Holmes, *Emeritus* Professor of Anatomy; Dr. H. J. Bigelow, *Emeritus* Professor of Surgery; Dr. H. P. Bowditch (Physiology); Dr. F. Minot (Theory and Practice of Physic); Dr. H. W. Williams (Ophthalmology); Dr. D. W. Cheever (Surgery); Dr. J. C. White (Dermatology); Dr. R. T. Edes (Assistant, Clinical Medicine); Dr. F. W. Draper (Assistant, Legal Medicine); Dr. F. T. Knight (Assistant, Laryngology); Dr. C. B. Porter (Assistant, Surgery); Dr. E. N. Whittier (Assistant, Clinical Medicine); Dr. J. Collins Warren (Assistant, Surgery); Dr. Reginald H. Fitz (Pathological Anatomy); Dr. William L. Richardson (Obstetrics); Dr. T. Dwight (Anatomy); Dr. Edward S. Wood (Chemistry); Dr. William H. Baker (Assistant, Gynæcology); Dr. W. B. Hills (Assistant, Chemistry).—Other instructors are:—Dr. S. H. Durgin (Lecturer on Hygiene); Dr. C. F. Folsom (Lecturer on Mental Diseases); Dr. H. P. Quincy (Instructor in Histology); Dr. F. A. Harris (Demonstrator of Medico-Legal Examinations); Dr. J. J. Putnam (Instructor in Diseases of the Nervous System); Dr. F. C. Shattuck (Instructor in Theory and Practice of Physic); Dr. E. H. Bradford (Assistant in Clinical Surgery); Dr. F. H. Davenport (Assistant in Gynæcology); Dr. G. M. Garland (Assistant in Clinical Medicine); Dr. J. W. Warren (Assistant in Physiology); Dr. G. W. West (Demonstrator of Bandaging and Apparatus); Dr. W. W. Gannett (Assistant in Pathological Anatomy); Dr. C. M. Green (Instructor in Obstetrics); Dr. T. M. Rotch (Instructor in Diseases of Children); Dr. C. S. Minot (Instructor in Histology and Embryology); Dr. F. H. Williams (Instructor in Materia Medica); Dr. W. C. Emerson (Assistant in Chemistry); Dr. W. J. Otis (Assistant in Operative Surgery); Dr. Samuel J. Mixter (Assistant in Anatomy); Dr. C. Harrington (Instructor in Hygiene and Assistant in Chemistry); Dr. H. C. Ernst (Demonstrator of Bacteriology); Dr. O. K. Newell (Assistant in Anatomy); Dr. H. F. Vickery (Assistant in Clinical Medicine). The following gentlemen will give special clinical instruction:—Dr. John Homans (Diagnosis and Treatment of Ovarian Tumours); Dr. T. W. Fisher and Dr. W. B. Goldsmith (Mental Diseases); Dr. Francis B. Greenough and Dr. A. Post (Syphilis); Dr. Oliver F. Wadsworth (Ophthalmoscopy); Dr. J. Orne Green and Dr. Clarence J. Blake (Otology); Dr. E. G. Cutler and W. W. Gannett (Auscultation); Dr. G. L. Walton (Diseases of the Nervous System); Dr. James R. Chadwick (Gynæcology); Dr. A. T. Cabot (Genito-urinary Surgery).

All candidates for admission who hold no degree in arts or science must pass a written examination on entrance to this School, in English, Latin, Physics, and in any one of the following subjects; French, German, Elements of Algebra or of Plane Geometry, Botany.

Instruction is given by lectures, recitations, clinical teaching, and practical exercises, distributed throughout the academic year. Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission.

The course of study recommended by the Faculty covers four years, but until further notice the degree of Doctor of Medicine will continue to be given upon the completion of three years of study. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of 75 per cent. upon all the examinations of this course. In addition to the ordinary degree of Doctor of Medicine as heretofore obtained, a certificate of attendance on the studies of the fourth year will be given to such students desiring it as shall have attended the course and have passed a satisfactory examination.

The order of studies and examinations for the four years' course is as follows:—*First Year:* Anatomy, Physiology, General Chemistry, and Materia Medica. *Second Year:* Practical and Topographical Anatomy, Medical Chemistry, Pathological Anatomy, Clinical Medicine, Surgery, and Clinical Surgery. *Third Year:* Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery. *Fourth Year:* Ophthalmology, Otology, Dermatology, Syphilis, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Obstetrics, Clinical and Operative Obstetrics, Clinical Medicine, Clinical and Operative Surgery, Forensic Medicine and Hygiene. Examinations in the subjects of the year are held at the end of each year.

The order for the three years' course is as follows: —*First and Second Years:* As for the four years' course. *Third Year:* Therapeutics, Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Ophthalmology, Dermatology, Syphilis, Otology, Laryngology, Mental Diseases, Diseases of the Nervous System, Diseases of Women, Diseases of Children, Forensic Medicine. The examinations of the first two years are common to both groups of students. The final examinations at the close of the third year are in the following subjects: Therapeutics, Obstetrics, Surgery and Clinical Surgery, Medicine, Clinical Medicine.

Every candidate for a degree must be twenty-one years of age; must have studied medicine three or four full years, have spent at least one continuous year at this School, have passed a written examination upon all the prescribed studies of the course taken, and have presented a thesis.

Course for Graduates.—For the purpose of affording to those already Graduates of Medicine additional facilities for pursuing clinical, laboratory, and other studies in such subjects as may specially interest them, the Faculty has established a course which comprises, in addition to the list of special departments above stated, the following branches: Anatomy; Histology; Physiology; Medical Chemistry; Pathological Anatomy; Bacteriology. Graduates of other Medical Schools who may desire to obtain the degree of M.D. at this University will be admitted to examination for this degree after a year's study in the Graduates' Course.

Fees.—The fees are: for Matriculation, 5 dollars; for the year, 200 dollars; for one term alone, 120 dollars; for Graduation, 30 dollars. For Graduates' course the fee for one year is 200 dollars; for one term, 120 dollars; and, for single courses, special fees. Payment is made in advance.

Students of regular standing in any one department of Harvard University have a right to attend lectures, recitations, and examinations in any other departments without paying additional fees.

JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

The sixty-third Session of this College will begin on Oct. 1, and continue till the end of March 1888. The lectures will be delivered by the following professors: Dr. Roberts Bartholow (Materia Medica, General Therapeutics, and Hygiene); Dr. Henry C. Chapman (Institutes of Medicine and Medical Jurisprudence); Dr. J. M. Da Costa (Practice of Medicine); Dr. W. S. Forbes (Anatomy); Dr. J. H. Holland (Medical Chemistry and Toxicology); Dr. S. W. Gross (Principles of Surgery and Clinical Surgery); Dr. J. H. Brinton (Surgery and Clinical Surgery); Dr. T. Parvin (Obstetrics and Gynæcology); Dr. W. Thomson (Ophthalmology); Dr. M. Longstreth (Lectures on Pathological Anatomy).

A spring course of Supplementary Lectures is given, beginning early in April and ending early in June. There is no additional charge for this course to matriculates of the College, except a registration fee of 5 dollars; non-matriculates pay 40 dollars, 35 of which are, however, credited on the amount of fees paid for the ensuing Winter Course.

To each course of the regular curriculum there is appended a laboratory course, carried on in large and thoroughly equipped apartments in the college, by specially appointed Demonstrators, under the immediate direction of the Professor. In this way each candidate for the degree of M.D. is immediately and personally taught in obstetrics and gynæcology, physical diagnosis, laryngology, ophthalmology, medical chemistry, pharmacy, materia medica and experimental therapeutics, physiology, histology and experimental physiology, and minor surgery, bandaging, operations on the cadaver, &c. In the department of medicine there are clinical conferences and practical lessons in physical diagnosis. This course of instruction is free of charge, but obligatory upon candidates for the degree, except those who have had such instruction and those who are graduates of other colleges of ten years' standing.

Opportunities are afforded to graduates in Medicine for pursuing special courses, and for instruction in recognised specialities.

Clinical instruction is given throughout the year at the Hospital of Jefferson Medical College, and at the Pennsylvania and other hospitals.

A candidate for the degree of M.D. must be of good moral character, and at least twenty-one years of age. He must have studied medicine for not less than three years, and have attended at least two full winter sessions of lectures, one of which must have been in this College. At least one course of Practical Anatomy and one of Clinical Instruction must have been attended; and he must present a thesis, of his own composition and in his own handwriting, on some medical subject. No honorary degrees in medicine are granted.

The *Fees* are: for a full Course, 140 dollars; Matriculation Fee (paid once only), 5 dollars; Practical Anatomy, 10 dollars; Graduation Fee, 30 dollars; for a full course of Lectures to those who have attended two full courses at other recognised Colleges, the Matriculation Fee and 70 dollars; to Graduates of other Colleges, of less than ten years, the Matriculation Fee and 70 dollars.

UNIVERSITY OF THE CITY OF NEW YORK.

The Professors in the Faculty of Medicine are: Dr. Charles I. Pardee (Diseases of the Ear); Dr. Alfred L. Loomis (Pathology and Practice of Medicine); Dr. A. Ranney (Anatomy); Dr. W. H. Thompson (Materia Medica and Therapeutics, and Diseases of the Nervous System); Dr. J. W. S. Arnold (Physiology and Histology—*Emeritus*); Dr. J. Williston Wright (Surgery); Dr. Faneuil D. Weisse (Practical and Surgical Anatomy); Dr. W. M. Polk (Obstetrics and Diseases of Women and Children); Dr. L. A. Stimson (Anatomy and Clinical Surgery); Dr. R. Witthaus (Chemistry and Physics); Dr. Stephen Smith (Clinical Surgery); Dr. A. E. Macdonald (Medical Jurisprudence and Diseases of the Mind); Dr. H. Knapp (Ophthalmology); Dr. S. O. Vanderpoel (Public Hygiene); Dr. L. Johnson (Medical Botany). There are also six clinical professors: viz., Dr. Drake (Medicine); Dr. Shaffer (Orthopædic Surgery); Dr. Morrow (Dermatology); Dr. Winters (Diseases of Children); Dr. Piffard (Dermatology); and Dr. Jarvis (Laryngology). Dr. E. J. Bartlett and Dr. W. G. Thompson are Lecturers on Physiology.

The Collegiate Year is divided into three Sessions:

a Preliminary Session, a Regular Winter Session, and a Spring Session.

The Regular Winter Session will begin September 29, 1887, and end about the middle of March 1888. The plan of instruction consists of didactic and clinical lectures, recitations, and laboratory work in all subjects in which it is practicable.

In addition to the ordinary clinics, special clinical instruction, without additional expense, will be given to the candidates for graduation during the latter part of the regular session in the wards of the Hospitals and at the Public and College Dispensaries.

Each of the seven Professors, or an Assistant, of Chemistry, Medicine, Anatomy, Materia Medica, Physiology, Surgery, and Obstetrics, will in one evening in each week conduct a recitation on his subject.

The Spring Session will begin about the middle of March and end the last week in May. The daily clinics and special practical courses will be the same as in the winter session, and there will be lectures on special subjects by the members of the Faculty. It is supplementary to the Regular Winter Session. Nine months of continued instruction are thus secured to all students of the University who desire a thorough course.

Fees.—These are: for Course of Lectures, 140 dollars; Matriculation, 5 dollars; Demonstrator's Fee (including material for dissection), 10 dollars; final Examination Fee, 30 dollars.

BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

THE teaching staff of the College consists of the following professors:—Dr. Isaac E. Taylor (Obstetrics and Diseases of Women)—*Emeritus:* Dr. Fordyce Barker (Clinical Midwifery and Diseases of Women); Dr. B. W. McCready (Materia Medica and Therapeutics and Clinical Medicine)—*Emeritus:* Dr. Edward G. Janeway (Principles and Practice of Medicine and Clinical Medicine); Dr. F. S. Dennis (Principles and Practice of Surgery and Clinical Surgery); Dr. Lewis A. Sayre (Orthopædic Surgery and Clinical Surgery); Dr. Alexander B. Mott (Clinical and Operative Surgery); Dr. Wm. T. Lusk (Obstetrics and Diseases of Women and Children, and Clinical Midwifery); Dr. A. A. Smith (Materia Medica and Therapeutics, and Clinical Medicine); Dr. Austin Flint (Physiology and Physiological Anatomy); Dr. Joseph D. Bryant (Anatomy and Clinical Surgery); Dr. R. Ogden Doremus (Chemistry and Toxicology); Dr. Henry D. Noyes (Ophthalmology and Otology); Dr. John P. Gray (Psychological Medicine and Medical Jurisprudence); Dr. Beverley Robinson (Clinical Medicine); Dr. Edward L. Keyes (Genito-Urinary Surgery, Syphilology, and Dermatology); Dr. J. L. Smith (Diseases of Children); Dr. F. H. Bosworth (Diseases of the Throat); Dr. C. A. Doremus (Adjunct to Chair of Chemistry and Toxicology); also the following lecturers: Dr. L. M. Yale (Adjunct, Diseases of Children); Dr. C. S. Bull (Adjunct, Ophthalmology and Otology).

The Collegiate Year in this Institution embraces the Regular Winter Session and a Spring Session. The Regular Session begins on Wednesday, September 22, 1888, and ends about the middle of March 1889. In addition to four didactic lectures on every week-day except Saturday, two or three hours are daily allotted to clinical instruction. Attendance upon two regular courses of lectures is required for graduation. The Spring Session consists chiefly of recitations from text-books. This Session begins about the middle of March, and continues until the middle of June. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building. The Carnegie Laboratory is open during the collegiate year, for instruction in microscopic examination of urine, and lessons and demonstrations in histology and pathology.

Fees.—For the Regular Session: Tickets to all the Lectures, Clinical and Didactic, 140 dollars; for students who have attended two full courses at other Medical Colleges, and for graduates of less than three years' standing of other Medical Colleges, 70 dollars; Matriculation fee, 5 dollars; Dissection fee (including material for dissection), 10 dollars; Graduation fee, 30 dollars. No fees for lectures are required from graduates of three years' standing, or from third-course students who have attended their second course at the Bellevue Hospital Medical College. For the Spring Session: Matriculation (ticket valid for the following winter), 5 dollars; Recitations, Clinics, and Lectures, 40 dollars; Dissection (ticket valid for the following winter), 10 dollars.

The Matriculation Examination consists of English composition; Grammar, an examination upon the above-mentioned composition; Arithmetic, including vulgar and decimal fractions; Algebra, including simple equations; Geometry, first two books of Euclid. This examination will be waived in the case of those who have received the degree of A.B., those who have passed the freshman examination for entrance into any incorporated literary college, those who have passed a matriculation examination at any recognised medical college or at any scientific school or academy in which an examination is required for admission.

COLLEGE OF PHYSICIANS AND SURGEONS OF NEW YORK.

THIS is otherwise known as the Medical Faculty of Columbia College.

Candidates for the degree of Doctor of Medicine must have attended two full courses of lectures on Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Obstetrics, Surgery, Pathology, and Practical Medicine. The second course must have been given in this College. Students are permitted, and are recommended, to complete the two full courses by attendance during three or more sessions, taking only certain branches in each session. Candidates must have studied Practical Anatomy during one winter's session; have been engaged during three years in the study of medicine under a regular physician or surgeon; have attained the age of 21 years, and be of good moral character. Each candidate must present a thesis on some medical subject, and pass an examination in the seven branches of Medical Science above mentioned.

The examinations for the degree of Doctor of Medicine are in writing, and are held twice a year: viz. (1) immediately after the close of the lectures of the college year in May; (2) during the second and third weeks of September. According to the merits of his thesis and examinations, three results of the latter are possible in the case of a candidate for the degree of M.D. 1. He is 'passed' when his thesis

and examinations have been satisfactory in each and all of the seven principal branches of medical teaching. 2. He is 'conditioned' when the average merit of his thesis and examinations has been satisfactory, while in one or more branches he has been found deficient. In this case the candidate can proceed to his degree only on the condition that he first pass a re-examination in the deficient branch or branches, not sooner than at the next regular semi-annual examination. 3. He is 'rejected' when the average merit of his thesis and examination has been unsatisfactory : *in this case the candidate must be re-examined in all the seven branches*, but the writing of a new thesis is rarely required.

Final examinations are held twice a year : viz., immediately after the close of the lectures of the college year, and during the third and fourth weeks of September.

Students who have attended two courses of lectures (one being at this College) on Anatomy, Physiology, and Chemistry, may be examined on these subjects at the end of their second course ; and the examination, if satisfactory, is accounted final. Students and graduates of other schools are admitted under special regulations.

The fees are :—Yearly matriculation, 5 dollars ; Course of Lectures each Session, 140 dollars, or 20 dollars for each course ; Practical Anatomy, 10 dollars ; and Graduation Fee, 30 dollars.

NEW YORK POST-GRADUATE SCHOOL.

In 1882 there was founded in New York an institution under this name, for the purpose of giving instruction in medical science and practice to gentlemen who had obtained degrees in medicine.

No undergraduates are admitted, and no degrees are conferred, but the School is open to all legalised practitioners, and it is especially available for the young graduate who wishes to acquaint himself with the practical duties of his profession, or for older practitioners who are desirous of taking up some special branch of medicine, or who wish to familiarise themselves with the modern advances in diagnosis and treatment. The instruction is given by means of clinics, subjects, and specimens. There are no lectures except clinical lectures, and no demonstrations without subjects and specimens.

The Dispensary, and the Hospitals to which the instructors are attached, furnish more than 16,000 patients annually for the illustration of General Medicine and Surgery, Mental and Nervous Diseases, Gynæcology, Obstetrics, Genito-Urinary Diseases, Cutaneous and Syphilitic Affections, Orthopædic Surgery, Diseases of Children, Diseases of the Eye and Ear, and of the Throat and Nose. The new Anatomical Room provides for studies in Practical Anatomy and Operative Surgery on the dead body. Practical Pharmacy and Medical Chemistry are taught in the Chemical and Pharmaceutical Laboratories. The new Histological and Pathological Laboratory is also most thoroughly equipped. In the Department of Applied Anatomy, instruction is given on living models, as well as on the dead subject. In addition to the above, the various members of the Faculty hold positions and give instruction in various hospitals and dispensaries.

Each department of the School is open throughout the entire year, and special facilities are given to those who desire to prosecute any line of study, at any time.

The year is divided into two Terms, the *Regular* and the *Intermediate*. During the Regular Term instruction is carried on by the Professors, Associate Professors, and Lecturers. There is but one course, of four months, in the Intermediate Term. A daily clinic is held throughout this period.

Practitioners may enter the School at any time, and take one or more courses of seven weeks' duration, in any department. Special advantages are secured by those who take several courses or pursue continuous studies. Candidates for the *Army* and *Navy* will have special instruction in Civic, Naval, and Military Hygiene, Examination of Recruits, &c.

The Faculty of the School is constituted as follows :—Dr. William A. Hammond (Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity) ; Dr. D. B. St. John Roosa (Professor of the Diseases of the Eye and Ear, President of the Faculty) ; Dr. Frederic R. Sturgis (Professor of the Diseases of the Skin and Genito-Urinary Organs, and of Venereal Diseases) ; Dr. Clinton Wagner (Professor of the Diseases of the Nose and Throat) ; Dr. Thomas E. Satterthwaite (Professor of Pathology and General Medicine) ; Dr. Charles L. Dana (Professor of the Diseases of the Mind and Nervous System, and of Medical Electricity) ; Dr. M. Josiah Roberts (Professor of Orthopædic Surgery and Mechanical Therapeutics) ; Dr. Alexander J. C. Skene (Professor of the Diseases of Women) ; Dr. Andrew H. Smith (Professor of Clinical Medicine and Therapeutics) ; Dr. William O. Moore (Professor of the Diseases of the Eye and Ear) ; Dr. William F. Fluhrer (Professor of Clinical Surgery) ; Dr. Bache McE. Emmet (Professor of Diseases of Women) ; Dr. Edward Kershner (Professor of Naval, Military, and State Hygiene) ; Dr. Ambrose L. Ranney (Professor of the Anatomy and Physiology of the Nervous System) ; Dr. William H. Porter (Professor of Clinical Medicine and Pathology) ; Dr. George H. Fox (Professor of the Diseases of the Skin) ; Dr. Stephen S. Burt (Professor of Physical Diagnosis) ; Dr. Seneca D. Powell (Professor of Minor Surgery) ; Dr. C. A. Von Ramdohr (Professor of Obstetrics) ; Dr. Horace T. Hanks (Professor of Diseases of Women) ; Dr. H. J. Garrigues (Professor of Obstetrics) ; Dr. Lewis S. Pilcher (Professor of Clinical Surgery) ; Dr. Herbert G. Lyttle (Associate Professor of Genito-Urinary Diseases, and of Venereal Diseases) ; Dr. Graeme D. Hammond (Associate Professor of the Diseases of the Mind and Nervous System) ; Dr. J. R. Nilsen (Associate Professor of Diseases of Women) ; Dr. G. B. Hope (Associate Professor of Diseases of the Nose and Throat).

CANADA.

MEDICAL EXAMINING BODIES.

The following are the Medical Examining Bodies and Schools in the Dominion of Canada.

Ontario.—Toronto School of Medicine, affiliated with the University of Toronto and the University of Victoria College ; Trinity Medical College, affiliated with the Universities of Trinity College, Toronto, Manitoba, Queen's University, and Victoria University ; Royal College of Physicians and Surgeons, affiliated with the Queen's University ; Medical Department of the Western University, London ; Women's Medical College, affiliated with the University of Trinity College, Toronto ; Women's

Medical College, Kingston, affiliated with Queen's University.

Quebec.—Medical Department of McGill University; École de Médecine et de Chirurgie, affiliated with the University of Victoria; Medical Department of Laval University; Faculty of Medicine, University of Bishop's College; College of Physicians and Surgeons of Quebec.

Nova Scotia.—Halifax Medical College; Medical Faculty of Dalhousie University, Halifax.

Manitoba.—Manitoba Medical College, affiliated with the University of Manitoba.

The possession of an M.D. degree does not entitle the holder to practise. He must be *registered*. In the Provinces of the Dominion, with the exception of Ontario, the possession of a Degree in Medicine from a recognised University entitles the holder to register. In *Quebec*, graduates of the Universities of the province must appear in person at the May or September meeting of the Board, and present and swear to their diplomas. Registration is granted only at these periods. It is optional with the Board whether the holder of a degree from a Canadian University outside the Province of Quebec can register without further examination. In some cases the examination has been enforced. In *Ontario*, unless in the case of a registered practitioner of Great Britain, the examination of the College of Physicians and Surgeons of the province must be passed before registration. The examination is held every spring. In *Nova Scotia*, *New Brunswick*, *Manitoba*, and *British Columbia* the provincial boards accept the degrees of Canadian Universities without examination. *Prince Edward Island* has as yet no Medical Board. In most of the *West India Islands* a certificate of registration in one of the Provinces of the Dominion entitles the holder to practise.

UNIVERSITY OF TORONTO.

THE degree of Bachelor of Medicine may be obtained either (1) by taking a Pass Course, or (2) by taking an Honour Course.

Candidates must pass the Matriculation Examination unless (1) they possess a Degree in Arts, not being honorary, from any Dominion or British University; or (2) they have already matriculated in the Faculty of Arts, or in the Faculty of Law in this University; or (3) they have been registered as students in the College of Physicians and Surgeons of Ontario. They must also produce satisfactory certificates of good conduct, and of having completed the sixteenth year of their age. The Matriculation Examination (both Pass and Honours) commences in the latter part of June, and Supplemental Examinations (Pass alone) are held in the latter part of September, when those who were rejected in June, as well as new candidates, may present themselves. Candidates on giving notice of intention to present themselves must signify whether they propose taking the Pass or the Honour Examination. Scholarships are only awarded in connection with the latter. The following groups of subjects must be passed:—(1) Two out of four languages—Latin, Greek, French, and German—one of which must be Latin; (2) Mathematics, including Arithmetic, Algebra to the end of Quadratics, and the first three books of Euclid; (3) English Grammar, Composition, and Dictation, with the Outlines of English History and the Geography of America and Europe.

Undergraduates must attend lectures and receive practical instruction during four years at a recognised School of Medicine. Each undergraduate, at the end of each of the four years, may present himself at the Annual Examination, or he may take the primary examination at the end of the second and the final examination at the end of the fourth year. Graduates in Arts of this University, with honours in the department of Natural Sciences, are exempted from the First Professional Examination, and from the fee for the same. They must, however, take Anatomy along with the Second Professional Examination.

The following are the certificates required for the different examinations, and the subjects of examination.

First Professional Examination.—Certificates are required:—1. Of Matriculation. 2. Of having attended a course of lectures on each of the following subjects—Anatomy, 100 lectures; Physiology and Inorganic Chemistry, each 60; Natural Philosophy, 20; Botany and Zoology, each 30. 3. Of practical instruction in Anatomy during six months.

Second Professional Examination.—Candidates must produce certificates:—1. Of having attended lectures on Anatomy, Physiology, Materia Medica, and Therapeutics, each 100 lectures; Organic Chemistry. 2. Of practical instruction in Anatomy, six months; Histology and Physiological Chemistry, each three months. 3. Of having dissected the human body once. 4. Of being skilled in compounding and dispensing Drugs.

Third Professional Examination.—The candidates must produce evidence: 1. Of having attended lectures on Practice of Medicine, Surgery, and Obstetrics, each 100 lectures; Clinical Surgery and Medicine and General Pathology, each 50; 2. Of having dissected the human body a second time; 3. Of Practical Instruction in Pathological Histology during three months.

Fourth Professional Examination.—Candidates must produce evidence: 1. Of having attended lectures on:—Clinical Medicine and Surgery, and Forensic Medicine, each 50 lectures; Hygiene, 25; Medical Psychology, 12; 2. Of Practical Instruction in Chemistry in its application to Hygiene and Forensic Medicine; 3. Of having attended at least six clinics in a Public Lunatic Asylum; 4. Of having conducted at least six Labours; 5. Of proficiency in Vaccination; 6. Of attendance in the wards of a Public Hospital accommodating not less than 100 beds during eighteen months; 7. Of attendance for six months on the out-practice of a Hospital, Dispensary, or registered Practitioner; 8. Of having attended twelve Necropsies.

Candidates for Honours are entitled to First Class Honours in any of the Professional Examinations if they obtain 75 per cent. of the aggregate marks; those who obtain 66 per cent. will be entitled to Second Class Honours. Extra papers on all the Pass Subjects will be set for Honour Candidates, as well as papers on certain extra Honour subjects, viz., Comparative Anatomy of the Vertebrata, Natural Philosophy, the Physiology of Nerve, Muscle, Circulation, &c. Candidates proceeding to the Degree of M.B. by taking the Honour Courses are grouped in two classes. Those receive the Degree with First Class Honours who have been placed in the First Class Honour List in the second, third, and fourth

Professional Examinations. Those receive their Degree with Second Class Honours who have been placed in the Honour List in the second, third, and fourth Professional Examinations.

Scholarships, &c.—The following Scholarships are annually offered for competition: At Matriculation, one of 100 dollars and one of 50 dollars; at each of the first three Professional Examinations, one of 120 dollars and one of 80 dollars. The First Year Scholarships are not open to Graduates in Arts with Honours in the Department of Natural Sciences. No Professional Scholarship will be awarded to any Candidate who has not obtained First Class Honours in the Examination for which it was conferred. Each Scholarship is tenable for one year only, but the Scholar of one year is eligible for the Scholarship of a succeeding year. A gold medal and three silver medals are offered annually for competition among the Undergraduates who have obtained the degree of M.B., with First Class Honours, and are awarded according to the percentage of marks in the aggregate results of the second, third, and fourth Professional Examinations; but the gold medal is only awarded on the special recommendation of the Examiners. Prizes, each of the value of 10 dollars, in books, may be awarded annually among undergraduates in Law, Medicine, and Arts, for the best composition in Greek Verse, Greek Prose, Latin Verse, Latin Prose, English Verse, English Prose, French Prose, or German Prose. Certificates of Honour will be given to those students who, at any of the examinations, have been placed in the First Class in Honours in any Department. One gold and two silver medals, called the 'Starr Medals,' are conferred upon the three Bachelors of Medicine who have obtained, in the course of their Annual Professional Examinations, the highest marks in the following subjects: Anatomy for the first and second years, and in Surgical Anatomy of the third year; Physiology for the first and second years, and Histology, Physiological Chemistry, and Practical Physiology of the second year; General Pathology and in Morbid Anatomy and Histology of the third year. Every recipient of the medal must have attained the standing of First Class in each of the above-mentioned subjects, and must have been classed in Honours in the Fourth Professional Examination.

Degree of M.D.—Candidates for the degree of M.D. must be of one year's standing from admission to the Degree of M.B., and must have composed an approved thesis upon some medical subject.

Fees.—The fees are: Matriculation, 5 dollars; each Professional Examination, 2 dollars; Degree of M.B., 20 dollars; Degree of M.D., 20 dollars; admission *ad eundem gradum*, 20 dollars.

UNIVERSITY OF TRINITY COLLEGE.

A CANDIDATE for the Degree of Doctor of Medicine and Master of Surgery in this University must have passed the Matriculation Examination in Arts or Medicine of Trinity College, or of some other recognised University, or that of the College of Physicians and Surgeons of Ontario or Quebec, or that of the Law Society of Upper Canada, or an examination equivalent to any of the above. The subjects of the Medical Matriculation Examination are: Writing and Dictation; English Language; Arithmetic; Algebra (including Simple Equations); Euclid (first two Books); Latin (Cæsar, *De Bello Gallico*, Books I. and II., or Books V. and VI.; or *Bellum Britannicum*; or Cicero, *De Lege Manilia*; or Virgil, *Æneid*, Book II.); and one of the following subjects: Scripture History, and St. Matthew's Gospel, ch. i. to ix., in Greek; Greek (Xenophon's *Anabasis*, Book I.); French (Voltaire's *Charles XII.*, Books VI. to VIII.); German (Schiller's *Thirty Years' War*, Book I.); or Natural Philosophy.

The candidate must produce a satisfactory certificate of good conduct, must be 21 years of age, and must have regularly attended lectures extending over four winter sessions, or have studied one year with a medical practitioner, and have subsequently attended lectures during three winter sessions. He must have attended, before the primary examination, two courses of six months each on Anatomy, Practical Anatomy, Chemistry, Materia Medica and Therapeutics, and Physiology, including Histology, and one course of three months of Practical Chemistry, including Toxicology and Botany. Before the final examination he must have attended two courses of six months each on Medicine, including Pathology, Surgery, Midwifery, and Diseases of Women and Children; two courses of three months each on Medical Jurisprudence, and one course on Sanitary Science. He must also have attended for at least eighteen months the practice of some General Hospital, and have attended, during two sessions, Clinical Lectures on Medicine and Surgery; and, for at least six months, the practice of a Lying-in-Hospital; or he must have otherwise enjoyed equivalent obstetrical advantages, with attendance upon at least six cases of Labour.

The examinations are Primary and Final. The Primary Examination embraces Descriptive Anatomy, Physiology (including Histology), General Chemistry and Chemical Physics, Practical Chemistry, Botany, Materia Medica and Therapeutics, and Toxicology. It may be passed at the close of the second year.

The Final Examination embraces Theory and Practice of Medicine, including Medical Pathology, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Sanitary Science. It takes place at the close of the fourth year.

The Primary and Final Examinations may be taken together at the end of the fourth year. Registered practitioners holding British or Colonial Diplomas, who furnish satisfactory evidence that they have passed an examination equivalent to the Primary, are required to pass only the Final Examination. The examinations are held annually in the spring.

Certificates of Honour are given to students who pass in first-class honours. Medals are awarded to students who obtain at least 75 per cent. of the maximum number of marks.

Fees.—These are: Primary Examination, 10 dollars; Final Examination, 14 dollars. Full fee, including all College Examinations, 24 dollars. Candidates rejected at either the Primary or the Final Examination have the fee returned, less 5 dollars.

TRINITY MEDICAL COLLEGE.

THIS College is in affiliation with the University of Trinity College; also with the Universities of Toronto and Manitoba, and Queen's and Victoria Universities; and is recognised by the Royal Colleges of

Physicians and Surgeons of Great Britain, by the King's and Queen's Colleges of Physicians in Ireland, and by the Conjoint Examining Boards in London and Edinburgh.

The Faculty consists of the following Professors: Walter B. Geikie, M.D. (Principles and Practice of Medicine and Clinical Medicine); H. Robertson, M.D. (Anatomy); J. Algernon Temple, M.D. (Obstetrics, Gynæcology, and Diseases of Children); Thomas Kirkland, M.A. (General Chemistry and Botany); C. W. Covernton, M.D. (Medical Jurisprudence and Toxicology); Fred. Le M. Grassett, M.B., C.M. (Principles and Practice of Surgery and Clinical Surgery); W. T. Stuart, M.D. (Practical and Analytical Chemistry); Charles Sheard, M.D. (Physiology and Histology); G. Sterling Ryerson (Ophthalmology, Otology, and Laryngology); Luke Teskey, M.D. (Pathology); John L. Davison, M.D. (Materia Medica and Therapeutics); G. A. Bingham, M.D. (Assistant Demonstrator of Anatomy); T. M. Hardie, M.B. (Zoology); E. B. Shutleworth (Practical Pharmacy, &c.); T. S. Covernton (Lecturer on Sanitary Science); Albert Powell Newton, M.D. (Lecturer on Surgical Appliances).

The Medical Council of Ontario requires that everyone who desires to be registered as a medical student shall present to the Registrar the official certificate of having passed the Second-class non-Professional Examination with Latin. These Examinations must include English Grammar, English Literature, Composition, Dictation, Arithmetic, Algebra and Euclid, History and Geography, Latin. Students who may have passed this examination without Latin can complete the examination by going up, before registration, for Latin only. Graduates in Arts, or students who have matriculated in Arts in any University in her Majesty's dominions, are not required to pass any further Matriculation Examination. The Universities of Trinity College and of Toronto, Queen's University, and Trinity Medical School, do not insist on the Matriculation Examination being passed before attendance on medical lectures, but strongly recommend that it should be passed as soon after entering as possible, and in every case before the Primary Professional Examination. A certificate of having passed the Matriculation Examination in any British or Colonial University, or that required by the Medical Council of Ontario, or by the various Colleges of Physicians or Surgeons in Great Britain and Ireland, or that of the College of Physicians and Surgeons of Quebec, or that of the Law Society of Ontario or Quebec, or having passed an examination, whether for a teacher's certificate in any of the provinces of the Dominion or an examination equivalent to any of the above, is also accepted by Trinity Medical School, and by the University of Trinity College. Non-matriculated students from the Maritime Provinces, Manitoba, and the North-West, the West Indies, or other British Colonies, the United States, or from any quarter, who do not take the Council's examinations, are admitted to attend lectures in the School. But if such desire to graduate at Trinity College, they must present themselves for the Trinity University Medical Matriculation Examination. Students who are not graduates or matriculates in Arts, who desire to graduate in the University of Toronto, must take the Medical Matriculation of that institution.

The matriculation of the Universities may be passed at any time before graduation.

The Toronto General Hospital has a large number of patients in the wards, who are visited daily by the medical officers in attendance. The attendance of outdoor patients daily is also very large. The Fever Hospital, the Burnside Lying-in Hospital, and the Eye and Ear Hospital are also in the same grounds. The Toronto Dispensary is open to students free of charge.

Daily Clinical instruction is given by members of the Hospital Staff on all interesting cases, Medical and Surgical. Special Clinical instruction is also given by the Professors of Midwifery at the Burnside Hospital, and by other members of the Staff of the Hospital, on Diseases of Women and Children, and on Practical Midwifery, and special Practical Instruction at the Eye and Ear Department of the Hospital is also regularly given, as well as on Dermatology.

Professional Examinations are conducted at the close of the first, the second, and the last sessions, and are known as the First Year's, the Primary, and the Final Examinations respectively.

1. *First Year.*—Anatomy of the Bones, Ligaments, Muscles, also the Viscera of the Abdomen and Thorax. Candidates for this examination must present a certificate of having dissected an upper and a lower extremity, and must pass practical examinations in the parts dissected. The Physiology of the Elementary Tissues, also of Respiration, Circulation, and Digestion. Elementary Materia Medica. Inorganic Chemistry, including chemical theory. Physics: heat, light, and electricity. Botany.—A supplementary first year's examination will be held on the first Saturday in November.

2. *Primary.*— Descriptive Anatomy, Physiology and Microscopic Anatomy, Chemistry, Theoretical and Practical, Toxicology, Botany (when not passed at the end of the first year), and Materia Medica. The primary examination may be passed at the close of the second winter session.

3. *Final.*—Theory and Practice of Medicine and Medical Pathology, Principles and Practice of Surgery, including Surgical Anatomy, Midwifery and Diseases of Women and Children, Medical Jurisprudence, and Sanitary Science. Should the candidate desire it, he may undergo his entire examination in all the branches at the end of the last session.

Certificates of Honour are awarded annually in all the professional examinations, to candidates who obtain not less than 75 per cent. of the total number of marks.

Scholarships and Medals.—Five scholarships are offered for competition in this school as follows. Three First Year's Scholarships, value 50, 30, and 20 dollars respectively, will be competed for at the close of the first session. Two Second Year's Scholarships are open to competition, at the close of the second winter session, to all students who have taken out their entire primary course at this school; value 50 and 30 dollars respectively. Scholarships are awarded only to the candidates who stand highest in the Honour lists. A gold and two silver medals are open to competition annually, at the close of their last session, by students undergoing examination in the school in the final branches.

Fellowship Diplomas.—Under the authority of the Special Act of the Legislature, incorporating the school, diplomas are awarded at the close of the final examination to candidates whose standing has been sufficiently high to merit them. These diplomas constitute students who obtain them

'Fellows by Examination' of Trinity Medical College, and such 'Fellows' are allowed in Great Britain the same privileges as are there accorded to holders of degrees in medicine from Colonial Universities, by the Royal College of Surgeons of England, the Royal College of Physicians of London, the Royal College of Surgeons, and the Royal College of Physicians of Edinburgh, and the King's and Queen's College of Physicians of Ireland; and also by the Conjoint Examining Boards in London and in Edinburgh.

Candidates for examination for the School Fellowship Diploma must have passed a recognised matriculation examination, and spent four years in pursuit of medical studies, and attended at least two full courses of primary and two courses of final lectures during either three or four winter sessions. A certificate of good moral character is required.

Appointments open to Students.—The Board of Trustees of the Toronto General Hospital annually appoint three students of the college as hospital assistants. The members of the Faculty who belong to the acting hospital staff each appoint two or more students to act as clinical clerks and dressers, whose duties are to take notes of the cases under treatment, and to carry out such directions as they may receive from the Professors. These positions are tenable for three months.

There are appointed annually two students who have distinguished themselves as anatomists, as prosectors, to prepare the material required for the lectures on anatomy; also two assistants to aid the demonstrators; and two assistants in physiological demonstration.

Fees.—The following are the fees: Anatomy, Surgery, Practice of Medicine, Obstetrics, Materia Medica, Physiology, General Chemistry, Clinical Medicine, and Clinical Surgery, 12 dollars each; Practical Anatomy, Practical Chemistry, Normal Histology and Pathological Histology, 8 dollars each; Medical Jurisprudence, 6 dollars; Botany and Sanitary Science, 5 dollars each; Registration, payable once only, 5 dollars. Optional Branches—Surgical Appliances, Pharmacy, Zoology, and Medical Psychology, 5 dollars each. All students who pay the fees for two full courses of lectures in any branch are entitled to a perpetual ticket for that branch, except Practical Anatomy, Practical Histology, Normal or Pathological, and Practical Chemistry, every course of which must be paid for. Botany and Sanitary Science are charged for once only. All fees must be paid in advance. The fees for the College examination are: for each 5 dollars: Hospital fees: Toronto General Hospital, perpetual, 20 dollars; Lying-in Hospital, six months, 5 dollars.

FACULTY OF MEDICINE OF McGILL UNIVERSITY, MONTREAL.

THE Faculty consists of the following professors and lecturers:—Sir William Dawson, C.M.G., LL.D., F.R.S. (Principal and Professor of Natural History); R. Palmer Howard, M.D., LL.D. (Dean of the Faculty). *Emeritus Professors:* William Wright, M.D. (Materia Medica); Duncan C. McCallum, M.D. (Midwifery); Robert Craik, M.D. (Chemistry, Treasurer of the Faculty). *Professors:* R. Palmer Howard, M.D., LL.D. (Professor of Medicine); G. E. Fenwick, M.D. (Professor of Surgery); G. P. Girdwood, M.D. (Professor of Chemistry); George Ross, M.A., M.D. (Professor of Clinical Medicine); Thomas G. Roddick, M.D. (Professor of Clinical Surgery); William Gardner, M.D. (Professor of Gynæcology); Francis J. Shepherd, M.D. (Professor of Anatomy and Librarian of the Faculty); Frank Buller, M.D. (Professor of Ophthalmology and Otology); James Stewart, M.D. (Professor of Pharmacology and Therapeutics, and Registrar of the Faculty); George Wilkins, M.D. (Professor of Medical Jurisprudence and Lecturer on Histology); D. P. Penhallow, B.Sc. (Professor of Botany); C. L. Macdonnell, B.A., M.D. (Professor of Hygiene and Demonstrator of Anatomy); T. Wesley Mills, M.A., M.D. (Professor of Physiology); James C. Cameron, M.D. (Professor of Midwifery and Diseases of Infancy). *Demonstrators, Instructors, &c.:* R. F. Ruttan, B.A., M.D. (Lecturer on Chemistry); William R. Sutherland, M.D. (Assistant Demonstrator of Anatomy and Curator of the Museum); George W. Major, B.A., M.D. (Instructor in Laryngology); Alex. D. Blackader, B.A., M.D. (Instructor in Diseases of Children); Robt. J. B. Howard, B.A., M.D. (Assistant Demonstrator of Anatomy); Wyatt G. Johnston, M.D. (Demonstrator of Pathology); James Bell, M.D. (Assistant to the Chair of Clinical Surgery); T. Johnson Alloway, M.D. (Instructor in Gynæcology); F. G. Finley, M.D. (Assistant Demonstrator of Anatomy).

The Matriculation Examination comprises the following subjects: 1. English Language, including Grammar and Composition. 2. English History. 3. Modern Geography. 4. Latin, including Translation from the original and Grammar. 5. Elements of Mathematics, comprising (*a*) Arithmetic, including Vulgar and Decimal Fractions; (*b*) Algebra, including Simple Equations; (*c*) Geometry, including the first two books of Euclid or the subjects thereof. 6. Elementary Mechanics of Solids and Fluids, comprising the elements of Statics, Dynamics, and Hydrostatics. 7. One of the following optional subjects: (*a*) Greek, (*b*) French, (*c*) German, (*d*) Italian, (*e*) any other modern language, (*f*) Logic, (*g*) Botany, (*h*) Elementary Chemistry. Graduates in Arts of recognised Universities are not required to submit to the Matriculation Examination, and the preliminary examinations in general education of the following bodies are accepted in lieu of the matriculation: Colleges of Physicians and Surgeons, Ontario and Quebec, New Brunswick Medical Board, Manitoba Medical College, British Columbian Medical Council.

Candidates for the degree of Doctor of Medicine and Master of Surgery must be 21 years of age, must have studied medicine four years, one session being at this school, and must pass the necessary examinations. Graduates in Arts of recognised Universities, and students who produce evidence of having studied a year with a physician subsequent to passing the Matriculation Examination, can qualify for examination after attendance on three sessions. The fee for the degree of Doctor of Medicine and Master in Surgery shall be 30 dollars, to be paid by the successful candidate immediately after examination.

Candidates for Final Examination shall furnish testimonials of attendance on the following branches of Medical Education, viz.:—Anatomy, Practical Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Principles and Practice of Surgery, Midwifery and Diseases of Women and Children, Theory and Practice of Medicine, Clinical Medicine, Clinical Surgery, of which two courses will be required of six months' duration; Medical Jurispru-

dence, of which one course of six months, or two courses of three months will be required; Practical Chemistry, Botany or Zoology, Hygiene, of which one course will be required of three months' duration; Histology, ten lectures and twenty-five demonstrations; General Pathology, twenty-five lectures. The candidate must give proof by ticket of having attended during eighteen months the practice of the Montreal General Hospital, or that of some other hospital approved of by this University, and have compounded medicines for six months. He must also give proof by ticket of having attended for at least six months the practice of the University or other Lying-in Hospital approved of by this University, and of having attended at least six cases of labour.

The examinations at the close of each session are arranged as follows: *First Year.*—Pass Examination in Botany and Histology. Sessional Examination in Anatomy, Chemistry, and Physiology. A maximum of one hundred marks will be allowed for the Sessional Examination in each subject, which marks shall be reckoned in the ranking of the candidate after the examination of the following year. *Second Year.*—Pass Examination in Anatomy, Chemistry, Practical Chemistry, and Physiology. Sessional Examination in Pharmacology and Therapeutics. One hundred marks will be allowed for the Sessional Examination, which marks shall be reckoned in the ranking of the candidate after the examination of the following year. *Third Year.*—Pass Examination in Pharmacology and Therapeutics, Medical Jurisprudence, Hygiene, and Pathology. *Fourth Year.*—Pass Examination in Medicine, Surgery, Obstetrics, Clinical Medicine, Clinical Surgery. By means of the above arrangement a certain definite amount of work must be accomplished in each year, and an equitable division is made between the primary and final branches. With regard to the Primary Examination at the end of the second year, it remains optional with the student whether he passes in all the branches or leaves two for the third year. In any case, Chemistry and one other must be taken at the close of the second year.

The Sessional Examinations at the close of the first and third years are compulsory. At the Primary Examination at the end of the second year, the student may leave two branches for the third year; in any case, Chemistry and one other must be taken at the end of the second year.

The fifty-sixth session will commence on Oct. 1, and will be continued until the end of the following March; this will be followed by a Summer Session, commencing about the middle of April and ending the first week in July.

The Primary subjects are now all taught practically as well as theoretically. For the department of Anatomy, besides a commodious and well-lighted dissecting-room, there is a special anatomical museum and a bone-room. The other branches are also provided with large laboratories for practical courses. There are a Physiological Laboratory, well stocked with modern apparatus; a Histological Laboratory, supplied with thirty-five microscopes; a Pharmacological Laboratory, in which experiments will be performed demonstrating the action of drugs, &c.; a large Chemical Laboratory, capable of accommodating 76 students at work at a time. Besides these, there is a pathological Laboratory, well adapted for its special work, and associated with it is a suite of rooms exclusively devoted to the study and culture of bacteria, furnished with a complete outfit of the best modern apparatus for this purpose.

The new building of the Medical Faculty, which was opened in 1885, is one of the most complete structures of its kind. Besides the Laboratories, there are two large lecture-rooms capable of seating 300 students each, also a demonstrating-room for a smaller number. There is also a Library of over 10,000 volumes, and a Museum, as well as Reading-rooms for the students.

Matriculation.—Students from Ontario and Quebec are advised to pass the Matriculation Examination of the Medical Councils of their respective Provinces before entering upon their studies. Students from Maritime Provinces, Manitoba, or British Columbia, must present themselves for the Matriculation Examination of the University on the first Friday in October or the last Friday of March.

The Montreal General Hospital is the most extensive clinical field in the Dominion. Last year's report shows that 2,347 Medical and Surgical cases were treated in the wards, and the great proportion of these were acute cases, as may be gathered from the fact that the average duration of residence was only 23·6 days. The number of outdoor patients that are treated in the Hospital averages from 80 to 90 daily. Operations are performed on the eye by Dr. Buller, after the outdoor patients have been seen, and students are invited to attend the same.

There are now special departments in the hospital for Gynæcology and Laryngology, presided over by specialists in these branches. The plan of teaching practical Gynæcology for the past five years with marked success has been the limitation of a number of students to two or three, who, in rotation, assist at the examinations, and receive instruction in the diagnosis and treatment of uterine diseases and the use of gynæcological instruments.

Clinical clerks in both medical and surgical wards are appointed every three months, and each one during his term of service conducts, under the immediate direction of the Clinical Professors, the reporting of all cases in the ward allotted to him. They will be awarded on application at the end of each session to final students of the year, in order of their standing in the primary examination. Dressers are also appointed to the Surgical wards and to the Outdoor Department. For these appointments application is to be made to the Professor of Clinical Surgery, and to the Assistant Physicians and Surgeons.

At the Montreal Dispensary 12,000 patients are treated yearly. The cases are of great variety, comprising a large number of pulmonary affections and children's diseases. Minor operations are of daily occurrence, and students are furnished with all possible facilities.

The Montreal Maternity has recently been much enlarged. The institution is under the direct supervision of the Professor of Midwifery, who devotes much time to individual instruction. Students who have attended one course of lectures are furnished with cases in rotation, which they are required to report and attend till convalescence. Two resident Accoucheurs are appointed yearly from the graduating class to hold office for a period of six months each. By an arrangement with the authorities of the Montreal General Hospital one of the residents acts as Clinical assistant to the Gynæcologists for a period of six months.

The fees, arranged according to years, are as follows :—First year, 69 dollars ; second year, 97 dollars ; third year, 97 dollars ; fourth year, 65 dollars ; Hospital Ticket, 20 dollars ; Lying-in Hospital (six months), 8 dollars ; Matriculation, 5 dollars ; Graduation, 30 dollars. The total Collegiate and Hospital expenses, spread over four years, amount to about 400 dollars.

BISHOP'S COLLEGE UNIVERSITY FACULTY OF MEDICINE, MONTREAL.

The Faculty consists of the following professors and teachers : Dr. F. W. Campbell (Principles and Practice of Medicine) ; Dr. J. B. Edwards (*Emeritus*, Practical Chemistry) ; Dr. R. A. Kennedy (*Emeritus*, Obstetrics and Diseases of Children) ; Dr. J. Perrigo (Surgery) ; Dr. J. B. McConnell (Materia Medica and (Therapeutics) ; Dr. Casey A. Wood (Pathology) ; Dr. G. E. Armstrong (Physiology) ; Dr. H. L. Reddy (Obstetrics) ; Dr. D. Gaherty (Hygiene) ; Dr. E. H. Trenholme (Gynæcology) ; Dr. G. B. Rowell (Anatomy) ; Dr. A. L. Smith (Medical Jurisprudence) ; Rev. J. B. Saunders, M.D. (Botany) ; Mr. J. T. Donald (Chemistry) ; Dr. A. Proudfoot (Ophthalmology and Otology) ; also the following lecturer, Mr. J. Bemrose (Practical Chemistry).

This University confers the degrees of Doctor of Medicine and Master of Surgery. The degree of Master of Surgery (C.M.) is not conferred on any person who does not at the same time obtain the degree of Doctor of Medicine (M.D.). Each student must undergo, prior to the commencement of his medical studies, a Preliminary Examination upon the following subjects :—English, French, Latin, Arithmetic, Algebra, Geometry, History, Belles-Lettres, and one of the following optional subjects : Greek, Natural and Moral Philosophy. Candidates for degrees must have been engaged uninterruptedly for four years in medical and surgical study ; but a certificate of having studied one full year with a duly licensed practitioner reduces the period of study at the University to three sessions. Students must matriculate afresh at the commencement of every session, on or before the 1st of December. Every candidate for graduation must be 21 years of age, and must give evidence by certificates of having attended : 1. Two six-months' courses of lectures on each of the following subjects : (*a*) General or Descriptive Anatomy, Practical Anatomy, Surgery, Medicine, Midwifery and Diseases of Women and Children, Chemistry, Materia Medica and Therapeutics, Physiology, Clinical Medicine, and Clinical Surgery ; (*b*) One six months' course or two three-months' courses of Medical Jurisprudence, one six-months' course of Pathology, one three-months' course of Botany, of Hygiene, and also of Practical Chemistry and Microscopy, and also a course of not less than twenty-five demonstrations upon Microscopic Anatomy, Physiology, and Pathology ; Clinical Medicine and Clinical Surgery ; courses of Practical Anatomy ; (*c*) For the last eighteen months, or three periods of six months each, the medical and surgical practice of a hospital in which are contained not less than fifty beds, under the charge of not less than two physicians or surgeons ; for at least six months compounding and dispensing medicines ; at least six cases of midwifery.

Of the four years of medical and surgical study, one full course on each branch mentioned in sections *a* and *b* must be attended in this University.

Every candidate is examined both in writing and *vivâ voce*. The Examinations are divided into Primary and Final. The Primary Examination comprehends Anatomy, Chemistry, Practical Chemistry, Materia Medica, Physiology, and Botany or Zoology. The Final Examination includes Practice of Medicine, Clinical Medicine, Surgery, Clinical Surgery, Midwifery and the Diseases of Women and Children, Medical Jurisprudence, Pathology, and Hygiene.

Candidates may be admitted to examination on the Primary branches at the end of the third year of their study. The Final Examination does not take place until the candidate has completed his fourth year.

The session of the Faculty opens in October. Students may attend the practice of either the Montreal General Hospital (200 beds) or of the Hôtel-Dieu Hospital (200 beds). At the Montreal General Hospital facilities are afforded for the study of Practical Pathology, under the direction of the Pathologist of the Hospital. The practice of the Montreal Dispensary is open to the students of Bishop's College. The Women's Hospital, under the supervision of the Faculty, is divided into two departments—Obstetrical and Gynæcological. The Gynæcological Department is attended by the Professors of Bishop's College. Two gold medals (the 'Wood' and the 'Robert Nelson' gold medals) and the 'Dr. David' Scholarship are competed for annually.

Fees.—The fees for the classes of Pathology, Hygiene, Botany, and Practical Anatomy, are 6 dollars each ; Medical Jurisprudence, 10 dollars ; Practical Histology, 16 dollars ; all other classes, 12 dollars each. Degree of Doctor of Medicine and Master in Surgery, 20 dollars ; Registration Fee, 1 dollar.

COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO.

All persons, whatever qualifications they may possess must be examined by this College in order to obtain a licence to practise in the province of Ontario.

Candidates for the membership of this College must spend four years (forty-eight months) in professional studies after having passed a Matriculation Examination in the English Language, Arithmetic, Algebra (including Simple Equations), Geometry (first two books of Euclid), Latin (Translation and Grammar), and either Greek, French, German, or Natural Philosophy (including Mechanics, Hydrostatics, and Pneumatics). Graduates in Arts, or students who have matriculated in Arts in any University in the British dominions, are not required to pass the Matriculation Examination ; and Graduates in Arts may pass the Final Examination at the end of three years.

Every candidate must have attended, in a University, college, or school of medicine, two courses of six months each (each course consisting of not less than 100 lectures) in Anatomy, Practical Anatomy, Physiology, Theoretical Chemistry, Materia Medica and Therapeutics, Medicine, Surgery, Midwifery and Diseases of Women and Children, Clinical Medicine and Clinical Surgery ; two courses, of three months each, in Medical Jurisprudence ; one course of three months in Practical Chemistry, including Toxicology and Botany ; one course of twenty-five demonstrations on Natural Histology, and a similar course on

Pathological Histology; and one course of twenty lectures on Sanitary Science.

Before being admitted to the Final Examination the candidate must have spent six months in compounding medicines, have attended the practice of a general hospital for twenty-four months, have attended six courses of Midwifery, and have attained the age of twenty-one years.

The Professional Examination is divided into primary and final. The Primary Examination, at the end of the second winter session, comprises Descriptive Anatomy, Physiology and Histology, Theoretical and Practical Chemistry, Toxicology, Materia Medica and Therapeutics, and Botany. The Final Examination comprises Medical and Surgical Anatomy, Theory and Practice of Medicine, Medical and Surgical Pathology, Surgery and Operative Surgery, Midwifery and Diseases of Women and Children, Operative Midwifery, and Medical Jurisprudence.

Any candidate who passes in three or more branches, but fails in the others, is required to pass in the latter only at a subsequent examination.

Students from recognised colleges outside the provinces of Ontario and Quebec must pass the matriculation examination, and afterwards attend one full winter course of lectures during two winter sessions in some one of the Ontario Medical Schools, and such other course or courses as may be necessary to complete the required curriculum; and must pass all the examinations.

The fees are :—Registration of Matriculation Examination, 20 dollars; Primary Examination, 20 dollars; Final Examination, including Registration, 30 dollars. Unsuccessful candidates are admitted to one subsequent examination without additional payment.

MEDICAL FACULTY OF DALHOUSIE UNIVERSITY, HALIFAX.

THIS institution was organised in 1867, incorporated as the Halifax Medical College in 1876, and reorganised under its present title in 1885.

Candidates for medical degrees must give evidence of having received a satisfactory general education before entering upon the course of study qualifying for the degrees, by passing either one or other of the matriculation examinations of this Faculty, or some other examination recognised by the Senate as sufficient. The lower matriculation examination satisfies the requirements of the General Medical Council of Great Britain as to the preliminary examination which must be passed by persons wishing to register as medical students, and a certificate of having passed enables the holder thereof to register as a medical student in Great Britain. The higher examination satisfies the requirements of the University of Edinburgh in the same respect. Certificates will be issued to candidates showing the subjects in which they passed, and the extent to which their knowledge of these subjects was tested. A certificate of the possession of a university degree in Arts or of having passed the matriculation examination of the Provincial Medical Board of Nova Scotia shall be considered by this university sufficient evidence of satisfactory general education.

Candidates for the Degree of M.D. and C.M. must pass two examinations—the Primary and the Final Examinations.

Primary Examination.—Candidates must produce certificates: (1) of having passed the matriculation examination, or other examination recognised as sufficient, at least two academic years previously, and of having completed their sixteenth year at the date of passing the said examination; (2) of having, after passing the matriculation or other equivalent examination, attended in the Halifax Medical College or in some school of medicine approved by the Senate, two courses of 100 lectures each, in each of the following subjects, viz., Anatomy, Chemistry, Materia Medica, and Physiology; and two courses of instruction of the same duration in Practical Anatomy, in the course of which they shall have dissected the whole body at least twice; (3) of having, after passing the matriculation examination, attended either in this University in the Halifax Medical College, or in some other university or college, approved by the Senate, one course of instruction of fifty lessons each in Botany and in Practical Chemistry; (4) either of having, after passing the matriculation examination, attended at the Halifax Medical College or at some college approved by the Senate, one course of instruction of fifty lessons in Practical Pharmacy, or of having had three months' practice in the dispensing of drugs with a recognised apothecary or dispensing medical practitioner. Candidates must pass written and oral examinations in Chemistry (including Practical Chemistry), Botany, Anatomy (including Practical Anatomy), Physiology and Materia Medica (including Practical Pharmacy). Candidates may appear for examination in Botany one academic year after passing the matriculation examination.

Final Examination.—Candidates for this examination must furnish certificates—(1) that they have completed their twenty-first year or that they will have done so on or before the day of graduation (this certificate shall be signed by themselves); (2) of having passed the primary examination at this University, or at the Halifax Medical College prior to its affiliation with this University, or of having been admitted to the standing of an undergraduate who has passed this examination on certificates from recognised medical schools; (3) of either (*a*) having attended during four academic years at least two courses of lectures per year in subjects of the primary and final examination either in this University or at the Halifax Medical College, or at some other recognised medical school, or (*b*) having spent one calendar year in the study of medicine in the office or offices of one or more registered medical practitioners, and having subsequently attended during three academic years courses of lectures as above; (4) of having attended at least two courses of lectures during at least one academic year at the Halifax Medical College, and of having paid the fees for one course of lectures in each of the subjects of the examinations at that college; (5) of having attended, after passing the matriculation examination, at the Halifax Medical College, or at some school of medicine approved by the Senate, two courses of 100 lectures each in each of the following subjects, viz., Surgery, Obstetrics and Diseases of Women and Children, and Medicine; two courses of lectures, of 50 lectures each, in each of the following subjects, viz., Clinical Medicine and Clinical Surgery; and one course of 50 lectures in Medical Jurisprudence; (6) of having, after passing the matriculation examination, attended during one calendar year the practice of the provincial and city hospital, or that of some other hospital approved by the Senate; (7) of having attended for at least six

months the practice of a lying-in hospital, approved by the College, or of having attended at least six cases of midwifery, under a recognised practitioner; (8) of having obtained proficiency in the practice of vaccination under a recognised practitioner. Candidates must pass written and oral examinations in the following subjects:—Principles and Practice of Medicine, Obstetrics and Diseases of Women and Children, Principles and Practice of Surgery, and Medical Jurisprudence. The oral examinations in Medicine and Surgery shall include clinical examinations conducted at the bedside, cases being submitted for diagnosis and treatment. Candidates may appear for examination in Medical Jurisprudence alone, three academic years after passing the matriculation examination, on presentation of the certificates specified above so far as they apply to this subject.

The examinations are held in the third week of April. Candidates must transmit the certificates to the Secretary of the Senate at least fourteen days before the date of the examination, enter their names in the register of undergraduates before the date of examination, and pay on registration one-half of the graduation fee. Should the candidate fail to pass, the fee will not be returned to him; but he will be admitted to any one subsequent examination without fee.

Fees.—The following fees are payable in all cases in advance:—Registration, 2 dollars; Matriculation Examination, 10 dollars; Chemistry Class, 12 dollars; Chemistry Laboratory (three months' course), 6 dollars; Botany Class, 6 dollars; Graduation, 20 dollars.

AUSTRALASIA.

LAWS REGULATING THE PRACTICE OF MEDICINE.

The following is a summary of the chief laws regulating the practice of Medicine in the Australasian Colonies.

New South Wales.—Any person who shall prove that he has had a regular course of medical education of not less than three years' duration, and, after due examination, has received a degree from the University of Sydney, or a degree or diploma from any other body duly recognised in the country to which the applicant belongs, and entitling him to practise therein, shall be deemed to be a legally qualified medical practitioner, and shall be entitled to a certificate from the Medical Board.

New Zealand.—The holders of British and Irish degrees, diplomas, and licences registrable under any Act of the Imperial Parliament; persons who have received in any country a degree or diploma entitling them to practise Medicine or Surgery; and duly qualified Medical Officers of the Army and Navy are entitled to be registered. Every applicant must give notice of his intention to the Registrar, and produce his diploma or other evidence of qualification. The notice of application shall be published in a newspaper; and the Registrar, if he see fit after examination, may refuse to enter the name of the applicant. The fees payable are: On deposit of evidence of qualification, £1; certificate of registration, 5*s.* For alteration of qualification in the Register, the fee is 10*s.*; for any other alteration in the Register, 5*s.*

Queensland, South Australia, Tasmania, Victoria.—The conditions under which qualified practitioners can be registered are in general similar to those above described.

UNIVERSITIES GRANTING DEGREES IN MEDICINE.

The Universities in Australasia, and the degrees in Medicine and Surgery which they grant, are: Sydney (New South Wales)—Bachelor of Medicine, Doctor of Medicine, and Master of Surgery; Otago (New Zealand)—Bachelor and Doctor of Medicine; Adelaide (South Australia)—Bachelor of Medicine: Melbourne—Bachelor of Medicine, Doctor of Medicine, Bachelor of Surgery, and Master of Surgery.

Medical Schools providing for a complete curriculum of professional study are attached to the Universities of Sydney, Otago, and Melbourne. The Medical School of the University of Adelaide, which was opened in 1885, provides only instruction in the elementary subjects—Natural Science, Chemistry, Anatomy, and Physiology.

TEXT-BOOKS.

In every medical school certain text-books are preferred above others, and it is generally advisable for the student to purchase those which are most widely read in his school. He should not spend any money on books until he has chosen and entered the institution where he intends to pursue his studies. There his future teachers and fellow-students will be able to afford him the necessary information. The student need not put himself to expense in order to procure works of high cost, as such publications are generally to be found in the library of his hospital. The subjoined notes may serve to inform the student in general terms of the works which he may use as text-books. The list is not intended to be exclusive, nor can we undertake to decide which book is the best on any subject. Some students learn most readily from one book, some from another. In addition to the ordinary text-books, reference will be made to some which, though not absolutely necessary to the student, may be studied with advantage.

ANATOMY AND PHYSIOLOGY.

The student will always require a systematic work on anatomy and a manual for the dissecting-room. There are also some special works on that science which it is advisable for him to procure. Among them are Mr. Luther Holden's *Human Osteology* (seventh edition, J. & A. Churchill). The same firm publishes a *Student's Guide to Osteology*, by Mr. Wagstaffe. There is also Mr. Norton's *Osteology for Students* (Baillière, Tindall, & Co.). The anatomy of the joints is very completely described in Mr. Henry Morris's *Anatomy of the Joints of Man.* For the early study of anatomy Mr. St. George Mivart's *Elementary Lessons in Anatomy* (Macmillan & Co.) will be found instructive. Among the indispensable text-books treating of human anatomy as a whole are Quain's *Elements of Anatomy*, ninth edition, by Dr. Allen Thomson, Mr. Schäfer, and Mr. Thane; Gray's *Anatomy*,

eleventh edition, by Mr. Pick (Longmans & Co.); and Wilson's *Anatomist's Vade-Mecum*, tenth edition, by Dr. G. Buchanan and Mr. H. E. Clark of Glasgow (J. & A. Churchill). For use in the dissecting-room, Ellis's *Demonstrations of Anatomy* (ninth edition, Smith, Elder, & Co.) has long established its claim as a trustworthy guide. It contains reduced copies of plates in the author's *Illustrations of Dissections*, a more costly work which is most valuable for reference. Other good books for dissectors are Mr. Christopher Heath's *Practical Anatomy* (sixth edition, J. & A. Churchill); Dr. Carrington's *Manual of Dissections of the Human Body* (second edition, revised and enlarged by Mr. Arbuthnot Lane, George Bell & Sons); Holden & Langton's *Manual of Dissection* (fifth edition, J. & A. Churchill); Dr. Cleland's *Directory for the Dissection of the Human Body* (second edition, Smith, Elder, & Co.); and a *Dissector's Guide*, with illustrations, by Dr. D. J. Cunningham (Maclachlan & Stewart). The first part of the *Manual of Practical Anatomy*, by Dr. Cossar Ewart (Smith, Elder, & Co.), has appeared. Messrs. Hensman & Fisher's *Anatomical Outlines for the Use of Students in the Dissecting-Room and Surgical Class-Room* (Longmans & Co.) are useful. Treves's *Surgical Applied Anatomy* (Cassell & Co.) and Curnow's *Medical Applied Anatomy* are good text-books. Braune's *Atlas of Topographical Anatomy*, translated and edited by Mr. Bellamy (J. & A. Churchill), is a valuable book of reference. The drawings are made from plane sections of bodies. There are also Professor W. Turner's *Atlas of Human Anatomy* (A. Johnston); Bock's *Atlas of Human Anatomy* (Renshaw); Mr. Godlee's *Atlas of Human Anatomy* (J. & A. Churchill); and Allen & Shakespeare's *System of Human Anatomy* (Henry Kimpton); also Professor Flower's *Diagrams of the Nerves of the Human Body* (third edition, J. & A. Churchill); and a *Student's Atlas of Bones and Segments*, by Mr. Cathcart and Mr. Caird (W. & A. K. Johnston). *A Descriptive Atlas of Anatomy*, by Mr. Noble Smith, is published by Smith, Elder, & Co. There are also the well-known *Quain and Wilson's Anatomical Plates* (Smith, Elder, & Co.). Mr. Thomas Cooke's *Tablets of Anatomy and Physiology* (second edition) contain much information in a condensed form, and give useful aid in the study of the larger works. To students interested in the study of Zoology and Comparative Anatomy we would recommend, as works that will give much information without being too large or costly, Professor Flower's *Osteology of the Mammalia* (Macmillan & Co.), and Dr. H. A. Nicholson's *Manual of Zoology* and *Advanced Text-book of Zoology* (seventh edition, Blackwood); as well as Huxley's *Manuals of the Anatomy of Vertebrated and Invertebrated Animals* (J. & A. Churchill); Huxley and Martin's *Practical Biology*; Dr. Macalister's *Manuals of Zoology of the Invertebrate and of the Vertebrate Animals* (Longmans & Co.); and Mr. F. J. Bell's *Manual of Comparative Anatomy and Physiology* (Cassell & Co.). Professor Gegenbauer's *Elements of Comparative Anatomy*, translated by Mr. F. J. Bell (Macmillan & Co.), is a very complete work. For the study of Embryology, the chapter by Dr. Allen Thomson in Quain's *Anatomy*, or the *Elements of Embryology*, by Dr. M. Foster and Mr. Balfour (second edition, Macmillan & Co.), should be consulted. The subject has been most ably treated by the late Mr. Balfour in a *Treatise on Comparative Embryology* (Macmillan & Co.). Professor A. C. Haddon's *Introduction to the Study of Embryology* (Griffin & Co.) is one of the newest and best text-books for the student of that science.

For instruction in Histology, Mr. Schäfer's *Course of Practical Histology* (Smith, Elder, & Co.); Mr. Schäfer's *Essentials of Histology* (second edition, Longmans, Green, & Co.); Dr. Stirling's *Text-book of Practical Histology* (Smith, Elder, & Co.); Dr. Klein's *Elements of Histology* (third edition, Cassell & Co.); and Dr. Heneage Gibbes' *Practical Histology and Pathology* (second edition, H. K. Lewis) are excellent guides; as are also the chapter on General Anatomy in Quain's *Anatomy*, and Dr. Rutherford's *Outlines of Practical Histology* (J. & A. Churchill). The *Atlas of Histology*, by Dr. E. Klein and Mr. Noble Smith (Smith, Elder, & Co.), is a valuable work for reference. Other works which will be found useful are Professor Stricker's collection of essays on *Human and Comparative Histology* (New Sydenham Society); Heinrich Frey's *Histology and Histo-chemistry of Man*, translated by Mr. Barker (J. & A. Churchill); and Dr. Satterthwaite's *Manual of Histology* (Sampson Low & Co.).

In Physiology, the beginner will find trustworthy guides in Huxley's *Lessons in Elementary Physiology* and Huxley and Martin's *Elementary Biology* (both published by Macmillan & Co.); and, as text-books for use in medical schools, Dr. McKendrick's *Outlines of Physiology in Relation to Man* (Maclehose, Glasgow; and Macmillan & Co.); Kirkes's *Handbook of Physiology*, edited by Mr. Morrant Baker and Dr. V. D. Harris (eleventh edition, John Murray); Dr. Michael Foster's *Text-book of Physiology* (fourth edition, Macmillan & Co.); Dr. Gerald Yeo's *Manual of Physiology* (J. & A. Churchill); and Mr. Power's *Manual of Human Physiology* (Cassell & Co.) are to be recommended; and, for more advanced students, Dr. L. Hermann's *Elements of Physiology*, translated by Professor Gamgee (second edition, Smith, Elder, & Co.); Flint's *Text-book of Human Physiology* (H. K. Lewis); Dr. Landois' *Text-book of Human Physiology*, translated by Dr. Stirling (second edition, C. Griffin & Co.); and Dr. Carpenter's *Principles of Human Physiology*, by Mr. Power (ninth edition, J. & A. Churchill). Dr. Pye-Smith's *Syllabus of a Course of Lectures on Physiology* (J. & A. Churchill) will be found useful for self-examination. For instruction in Practical Physiology, Dr. Burdon Sanderson has prepared a manual of *Practical Exercises in Physiology* (second edition, H. K. Lewis). *An Elementary Course of Practical Physiology*, by Dr. M. Foster and Mr. Langley (Macmillan & Co.), is also a book that can be recommended to beginners; while the elaborate *Handbook for the Physiological Laboratory*, by Drs. Sanderson, Klein, Foster, and Brunton (J. & A. Churchill), is more fitted for those who desire an extended knowledge of practical physiology.

As guides in the use of the Microscope, there are Dr. Beale's *Microscope in Medicine*, Dr. Carpenter on the *Microscope* (sixth edition, J. & A. Churchill); Wythe's *Microscopist's Manual* (third edition, J. & A. Churchill); Marsh's *Microscopical Section Cutting* (second edition, J. & A. Churchill); Martin's *Manual of Microscopic Mounting* (second edition, J. & A. Churchill); and A. B. Lee's *Microscopist's Vade-Mecum* (J. & A. Churchill).

CHEMISTRY.

In Chemistry, among the most approved text-books are Fownes' *Manual of Chemistry*, edited, in two volumes, *Inorganic* and *Organic*, by Mr. Watts (thirteenth edition, J. & A. Churchill); Roscoe's *Lessons in Elementary Chemistry;* Miller's *Elements of Chemistry* (Longmans & Co.); Bloxam's *Chemistry, Inorganic and Organic* (fifth edition, J. & A. Churchill); Williamson's *Chemistry for Students* (Macmillan & Co.); Tidy's *Handbook of Modern Chemistry* (J. & A. Churchill); and Frankland and Jopp's *Inorganic Chemistry* (J. & A. Churchill). An elaborate *Treatise in Chemistry*, by Professors Roscoe and Schorlemmer, of Owens College, Manchester, is published by Macmillan & Co. For Practical Chemistry there is a work by Mr. Bloxam on *Laboratory Teaching* (fifth edition, J. & A. Churchill); and one on *Experimental Chemistry*, by Dr. J. E. Reynolds (Longmans & Co.). Bowman and Bloxam's *Practical Chemistry*, eighth edition (J. & A. Churchill), has an established reputation as a practical guide. There is also a little work by Dr. J. C. Brown on *Practical Chemistry* (J. & A. Churchill).

For instruction in Physiological and Medical Chemistry, there are Dr. T. C. Charles's *Elements of Physiological and Pathological Chemistry* (Smith, Elder, & Co.); and Dr. Ralfe's *Clinical Chemistry* (Cassell & Co.). As guides in the examinations of urine, there are Dr. Wickham Legg's *Guide to the Examination of the Urine* (sixth edition, H. K. Lewis); Dr. G. Oliver's *Bedside Urine Testing* (third edition, H. K. Lewis); and Dr. Whittaker's *Student's Primer on the Urine* (J. & A. Churchill). A second edition of Dr. Thudichum's *Pathology of the Urine* is published by J. & A. Churchill.

BOTANY.

Among text-books of Botany, Bentley's *Student's Guide to Structural, Morphological, and Physiological Botany* (fourth edition, J. & A. Churchill); Bentley's *Systematic Botany* (Churchill); Henfrey's *Elementary Course of Botany*, third edition, by Dr. M. T. Masters (Van Voorst); Balfour's *Manual of Botany* (A. & C. Black); Oliver's *Lessons in Elementary Botany* (Macmillan & Co.); Thome's *Botany*, translated by Bennet; Behrens' *Text-book of General Botany*, translated by Mr. P. Geddes (Y. J. Pentland); T. W. Shore's *Elementary Practical Biology, Vegetable* (J. & A. Churchill); and Prantl and Vine's *Text-book of Botany*, are all of value to the student. Sachs' *Text-book of Botany*, translated by Mr. A. W. Bennett and Mr. W. T. Dyer (Macmillan & Co.), is a valuable work of reference in regard to Structural and Physiological Botany. Bentley and Trimen's admirable plates of *Medicinal Plants* (J. & A. Churchill) should be consulted by the student both of Botany and Materia Medica.

MATERIA MEDICA AND THERAPEUTICS.

A well-known and useful book as a manual of Materia Medica is Dr. Garrod's *Essentials of Materia Medica and Therapeutics*, edited by Dr. Tirard (twelfth edition, Longmans & Co.). It requires, however, to be supplemented by a treatise on Therapeutics, for which purpose Dr. Ringer's *Handbook of Therapeutics* (eleventh edition, H. K. Lewis); Dr. Waring's *Manual of Practical Therapeutics* (fourth edition, J. & A. Churchill); and Dr. Farquharson's *Guide to Therapeutics* (fourth edition, Smith, Elder, & Co.), must be consulted. Dr. Milner Fothergill's *Practitioner's Handbook of Treatment* (second edition, Macmillan & Co.) will be of value to those who are interested in the endeavour to show the agreement between science and practice. Dr. H. C. Wood's *Treatise on Therapeutics* (sixth edition, Smith, Elder, & Co.) pays special attention to the therapeutic action of drugs. Other useful books are Dr. Lauder Brunton's *Text-book of Pharmacology, Therapeutics, and Materia Medica* (second edition, Macmillan & Co.); Dr. W. G. Smith's *Commentary on the British Pharmacopœia* (Smith, Elder, & Co.); Royle and Harley's *Manual of Materia Medica and Therapeutics* (sixth edition, J. & A. Churchill); Neligan's *Medicines*, edited by Mr. R. Macnamara (Fannin & Co.); Professor Bentley's *Organic Materia Medica* (Longmans, Green, & Co.); Dr. Phillips's *Materia Medica and Therapeutics* (new edition, J. & A. Churchill); Dr. Whitla's *Pharmacy, Materia Medica, and Therapeutics*, third edition (Renshaw); Dr. Mitchell Bruce's *Manual of Materia Medica and Therapeutics* (Cassell & Co.); Dr. Scoresby-Jackson's *Note-book of Materia Medica*, edited by Dr. Moinet (fourth edition, Maclachlan & Stewart; and Simpkin, Marshall, & Co.); Dr. Handsel Griffith's *Materia Medica and Pharmacy*, third edition, edited by Mr. Alfred Gubb (Baillière, Tindall, & Cox; and Fannin & Co., Dublin); Dr. R. Bartholow's *Practical Treatise on Materia Medica and Therapeutics* (fifth edition, H. K. Lewis); Dr. Thorowgood's *Student's Guide to Materia Medica* (second edition, J. & A. Churchill); and Craig's *Manual of Materia Medica and Therapeutics* (fourth edition, Livingstone, Edinburgh; and Simpkin, Marshall, & Co.). Dr. F. T. Roberts's *Officinal Materia Medica* (second edition, H. K. Lewis); and Dr. Isambard Owen's manual of *Materia Medica* (second edition, J. & A. Churchill), are highly recommended. Dr. Lauder Brunton's *Tables of Materia Medica* (new edition, Smith, Elder, & Co.) form a most comprehensive and valuable syllabus, and will be very useful to the student. Dr. W. H. Griffith's *Lessons on Prescriptions, and the Art of Prescribing* (Macmillan & Co.) is a useful work.

As text-books in the application of Electricity to Medicine, besides Dr. Althaus's *Treatise on Medicinal Electricity* (Longmans & Co.), the following are likely to prove useful to students:—a *Text-book of Electricity in Medicine and Surgery*, by Dr. G. V. Poore (Smith, Elder, & Co.); a *Handbook of Medical and Surgical Electricity*, and *How to Use a Galvanic Battery*, by Dr. H. Tibbits (second edition, J. & A. Churchill); Dr. A. de Watteville's *Practical Introduction to Medical Electricity* (second edition, H. K. Lewis); and his translation of Erb's *Electro-Therapeutics*, which forms vol. vi. of Ziemssen's *Handbook of General Therapeutics* (Smith, Elder, & Co.); Dr. Roberts Bartholow's *Medical Electricity* (Kimpton); and Dr. Hughes Bennett's *Electro-Diagnosis in Diseases of the Nervous System* (Lewis).

PATHOLOGY.

As a manual of Pathology, Dr. T. H. Green's *Introduction to Pathology and Morbid Anatomy* (sixth edition, Renshaw) has gained a deservedly high reputation. The *Lectures on Pathological Anatomy* of Drs. Wilks and Moxon (second edition, J. & A. Churchill); Dr. J. F. Payne's

Manual of General Pathology (Smith, Elder, & Co.); the same author's improved edition of Jones and Sieveking's *Manual of Pathological Anatomy* (J. & A. Churchill); Dr. G. S. Woodhead's *Practical Pathology* (second edition, Y. J. Pentland); Dr. J. Coats' *Manual of Pathology* (Longmans, Green, & Co.); and Mr. J. B. Sutton's *Introduction to General Pathology* (J. & A. Churchill), are also good books. A second edition of an English translation of Virchow on *Post Mortem Examinations: the Method of Performing them*, is published by J. & A. Churchill. Messrs. Smith, Elder, & Co. have published a *Manual of Necropsy*, by Dr. A. H. Newth, which is intended as a guide to the performance of *post mortem* examination. There are also *Surgical Pathology and Morbid Anatomy*, by Mr. A. Bowlby (J. & A. Churchill); a *Manual of Surgical Pathology*, by Mr. A. J. Pepper (Cassell & Co.), and Dr. Macalister's translation of Ziegler's *Text-book of Pathological Anatomy* (Macmillan & Co.). We would also strongly recommend students to consult, and to possess if possible, Rindfleisch's *Manual of Pathological Histology*, edited by the New Sydenham Society. Other highly valuable works for reference are Dr. Greenfield's translation of Lancereaux's *Atlas of Pathological Anatomy* (J. & A. Churchill), and a complete English translation by Mrs. Ernest Hart of a *Manual of Pathological Anatomy*, by Cornil and Ranvier (Smith, Elder, & Co.).

The interest which has in late years been excited in the study of micro-organisms in their relation to disease has called forth several works, which may be consulted with advantage. Among them may be mentioned Mr. E. M. Crookshank's *Introduction to Practical Bacteriology* (H. K. Lewis); Mr. Watson Cheyne's Collection of Recent Essays by various authors on Bacteria in Relation to Disease (New Sydenham Society); and Professors Cornil and Babes' treatise on *Les Bactéries et leur Rôle dans l'Anatomie et l'Histologie Pathologiques* (F. Alcan, Paris).

MEDICINE.

FOR the student who is commencing his clinical studies there are several very good guide-books. Among them are Dr. A. W. Barclay's *Manual of Medical Diagnosis* (third edition, J. & A. Churchill); Dr. S. Fenwick's *Student's Guide to Medical Diagnosis* (sixth edition, J. & A. Churchill); Dr. Graham Brown's *Manual of Medical Diagnosis* (Bell & Bradfute, and Simpkin, Marshall, & Co.); Dr. Byrom Bramwell's *Practical Medicine and Medical Diagnosis* (Pentland); Dr. O. Sturges' *Introduction to the Study of Clinical Medicine* (Smith, Elder, & Co.); Dr. Finlayson's *Clinical Manual for the Study of Medical Cases* (Smith, Elder, & Co.); and Dr. Warner's *Student's Guide to Medical Case-taking*, second edition (J. & A. Churchill); Dr. Churton's *Method of Case reporting for Clinical Clerks*. More advanced students and practitioners may consult with advantage Dr. Da Costa's *Medical Diagnosis* (third edition, Smith, Elder, & Co.). As a guide in physical diagnosis, Dr. Gee's *Auscultation and Percussion* (third edition, Smith, Elder, & Co.) may be safely trusted; also Dr. S. West's *How to Examine the Chest*. Other useful books for the same purpose are Dr. Flint's *Manual of Percussion and Auscultation* (J. & A. Churchill); and Dr. Reginald Thompson's *Physical Examination of the Chest in Health and Disease* (H. Renshaw).

Among text-books in General Medicine, which may be recommended for the use of the student, are Dr. F. T. Roberts's *Handbook of the Theory and Practice of Medicine* (sixth edition, H. K. Lewis); Dr. Bristowe's *Theory and Practice of Medicine* (sixth edition, Smith, Elder, & Co.); Dr. Tanner's *Practice of Medicine* (edited by Dr. Broadbent, seventh edition, Renshaw); Dr. Aitken's *Science and Practice of Medicine* (seventh edition, C. Griffin & Co.); Dr. H. Hartshorne's *Essentials of the Principles and Practice of Medicine* (fifth edition, Smith, Elder, & Co.); Dr. Flint's *Clinical Medicine* (J. & A. Churchill); Dr. Aitken's *Outlines of the Science and Practice of Medicine* (second edition, C. Griffin & Co.); Dr. Flint's *Principles and Practice of Medicine* (fifth edition, Kimpton); Dr. Roberts Bartholow's *Treatise on the Practice of Medicine* (fifth edition, H. K. Lewis); Dr. Charteris's *Student's Guide to the Practice of Medicine* (third edition, J. & A. Churchill); Dr. A. Carter's *Elements of Practical Medicine* (fourth edition, Lewis); and the *Principles and Practice of Medicine*, by the late Dr. Hilton Fagge, edited by Dr. Pye-Smith (second edition, J. & A. Churchill). The advanced student and the practitioner will do well to consult Dr. Russell Reynolds' *System of Medicine* (five volumes, Macmillan & Co.); Trousseau's *Lectures on Clinical Medicine* (New Sydenham Society); Ziemssen's *Cyclopædia of the Practice of Medicine* (Sampson Low & Co.); Dr. Niemeyer's *Text-book of Practical Medicine* (H. K. Lewis); and Sir Thomas Watson's *Lectures on the Principles and Practice of Physic* (Longmans & Co.). Dr. Quain's *Dictionary of Medicine* is also a valuable work for reference.

SURGERY.

MR. ERICHSEN'S *Science and Art of Surgery* (ninth edition, by Mr. M. Beck, Longmans & Co.); Mr. Holmes's *Surgery—its Principles and Practice* (fourth edition, Smith, Elder, & Co.); Mr. Bryant's *Practice of Surgery* (fourth edition, J. & A. Churchill); and Mr. Gant's *Science and Practice of Surgery* (third edition, Baillière, Tindall, & Cox), are all very complete works, one of which should be in the possession of the student. For those who prefer smaller and more condensed publications, there is the well-known Druitt's *Surgeon's Vade-Mecum* (twelfth edition, J. & A. Churchill). Mr. Frederick Treves' *Manual of Surgery* (Cassell & Co.) is a good systematic work on a small scale; and we can also recommend Mr. Walsham's *Surgery, its Theory and Practice* (J. & A. Churchill). Mr. Christopher Heath has brought out a *Student's Guide to Surgical Diagnosis* (second edition, J. & A. Churchill). There is also a manual of *Surgical Diagnosis*, by Mr. A. P. Gould (Cassell & Co.). Other books which may be consulted with advantage are, Mr. Holmes's and Mr. Hulke's *System of Surgery* (third edition, Longmans & Co.); Mr. Spence's *Lectures on Surgery* (A. & C. Black); Dr. S. D. Gross's *System of Surgery* (sixth edition, Smith, Elder, & Co.); and Billroth's *Lectures on Surgical Pathology and Therapeutics* (H. K. Lewis). Mr. Watson Cheyne's *Antiseptic Surgery*, and his *Manual of the Antiseptic Treatment of Wounds* (Smith, Elder, & Co.), are standard works on the subject of which they treat.

For the guidance of the student who is being

instructed in practical and operative surgery, there are several good books. Mr. Christopher Heath's *Manual of Minor Surgery and Bandaging* (seventh edition, J. & A. Churchill) has for several years enjoyed a high reputation. The *Manual of Operative Surgery on the Dead Body*, by Mr. Thomas Smith and Mr. Walsham (Longmans & Co.); Mr. Christopher Heath's *Guide to Surgical Diagnosis* (second edition, J. & A. Churchill); Mr. Berkeley Hill's *Essentials of Bandaging* (sixth edition, H. K. Lewis); Mr. Bellamy's *Student's Guide to Surgical Anatomy* (third edition, J. & A. Churchill); Mr. Arthur Barker's *Short Manual of Surgical Operations* (Longmans & Co.); Mr. W. Arbuthnot Lane's *Manual of Operative Surgery* (Bell & Sons); Mr. Joseph Bell's *Manual of the Operations of Surgery* (fourth edition, Maclachlan & Stewart); Pye's *Surgical Handicraft* (Trübner & Co.); and Stimson's *Operative Surgery* (Lewis), are also works which can be recommended. *Surgical Operations*, by Sir W. Mac Cormac (Smith, Elder, & Co.); a *Manual of Regional Surgery*, by Mr. F. A. Southam (J. & A. Churchill), is a useful work; Mr. J. M'Lachlan's *Anatomy of Surgery* (Edinburgh, E. & S. Livingstone); and a *Manual of Operative Surgery*, by Dr. Joseph D. Bryant (Bermingham & Co.), are also good practical works. Other works most valuable for reference are Mr. Jonathan Hutchinson's *Illustrations of Clinical Surgery*, consisting of plates, woodcuts, &c., illustrating surgical diseases, symptoms, accidents, operations, &c. (published in fasciculi by J. & A. Churchill); Mr. Hutchinson's *Lectures on Clinical Surgery* (J. & A. Churchill); Mr. C. Heath's *Dictionary of Practical Surgery* (second edition, Smith, Elder, & Co.); Mr. C. Heath's *Course of Operative Surgery*, with coloured plates by M. Leveillé (second edition, J. & A. Churchill); Mr. Norton's edition of Bernard and Huette's *Text-book of Operative Surgery* (Baillière, Tindall, & Cox); Dr. Steven Smith's *Manual of the Principles and Practice of Operative Surgery* (Sampson Low & Co.); and Dr. J. Ashhurst's *International Encyclopædia of Surgery* (Macmillan & Co.). Every student should read Hilton's *Rest and Pain* (fourth edition, Bell & Sons), one of the finest works on the passive methods of treatment of surgical diseases in the English language. For the student of Military Surgery, Surgeon-General Longmore's work on *Gunshot Injuries* (Longmans & Co.), and Surgeon-Major Porter's *Surgeon's Pocket-book* (third edition, C. Griffin & Co.), are essential. A translation, by Mr. Clutton, of Professor Esmarch's *Surgeon's Handbook on the Treatment of Wounded in War* (Sampson Low & Co.) is also a valuable work.

MIDWIFERY; AND DISEASES OF WOMEN AND CHILDREN.

The text-books of Obstetric Medicine which hold the first place in the present day are: Dr. W. S. Playfair's *Treatise on the Science and Practice of Midwifery* (fifth edition, Smith, Elder, & Co.); Drs. Robert and Fancourt Barnes's *System of Obstetric Medicine and Surgery* (Smith, Elder, & Co.); Dr. Galabin's *Manual of Midwifery* (J. & A. Churchill); and Dr. Leishman's *System of Midwifery* (third edition, J. Maclehose, Glasgow; and Macmillan & Co.). Every student should have one or other of these. There are also Dr. W. T. Lusk's *Science and Art of Midwifery* (third edition, H. K. Lewis); Dr. Parvin's *Science and Art of Obstetrics* (Pentland); and Cazeaux and Tarnier's *Obstetrics; the Theory and Practice*, translated by Dr. R. J. Hess (H. K. Lewis). For those who prefer smaller books, Dr. D. Lloyd Roberts's *Guide to the Practice of Midwifery* (third edition, J. & A. Churchill) will be useful. There are also Dr. Alfred Meadows's *Manual of Midwifery* (fourth edition, Renshaw); Milne's *Manual of Midwifery* (second edition, Livingstone; and Simpkin, Marshall, & Co.); and Dr. C. H. Carter's translation of Schröder's *Manual of Midwifery* (J. & A. Churchill). As works of illustrations, Dr. Martin's *Atlas of Obstetrics and Gynæcology*, edited by Dr. Fancourt Barnes (H. K. Lewis), Dr. H. Savage's *Female Pelvic Organs* (fifth edition, J. & A. Churchill), and Dr. Berry Hart's *Atlas of Female Pelvic Anatomy* (W. & A. K. Johnston), are to be recommended. Dr. J. G. Swayne's *Obstetric Aphorisms* (eighth edition, J. & A. Churchill) are very useful. Dr. Robert Barnes has issued a *Synoptical Guide to the Study of Obstetrics* (Smith, Elder, & Co.), which will be found valuable as an aid to study. An important department of obstetrics is ably treated in Dr. Fordyce Barker's *Clinical Lectures on Puerperal Diseases* (J. & A. Churchill). Dr. Barnes's *Lectures on Obstetric Operations* (third edition, J. & A. Churchill) should be in the possession of every advanced student and general practitioner; as should also the *Clinical History of the Medical and Surgical Diseases of Women*, by the same author (second edition, J. & A. Churchill). Dr. West's *Lectures on the Diseases of Women* (fourth edition, with additions by Dr. Matthews Duncan, J. & A. Churchill); Dr. Graily Hewitt's *Diagnosis and Treatment of Diseases of Women* (fourth edition, Longmans & Co.); Dr. Matthews Duncan's *Clinical Lectures on the Diseases of Women* (third edition, J. & A. Churchill); Professor Winckel's *Diseases of Women*, English translation by Dr. J. H. Williamson (Pentland); Dr. Edis's *Diseases of Women* (second edition, Smith, Elder, & Co.); the late Dr. J. Thorburn's *Practical Treatise on the Diseases of Women* (C. Griffin & Co.); Mr. Lawson Tait's *Diseases of Women* (Williams & Norgate); Dr. Emmet's *Principles and Practice of Gynæcology* (third edition, J. & A. Churchill); Dr. Gaillard Thomas's *Practical Treatise on the Diseases of Women* (fifth edition, Kimpton); Dr. Heywood Smith's *Practical Gynæcology* (J. & A. Churchill); Sir T. Spencer Wells's treatise on *Ovarian and Uterine Tumours* (J. & A. Churchill); Mr. Alban Doran's *Handbook of Gynæcological Operations* (J. & A. Churchill); Dr. Tilt's *Handbook of Uterine Therapeutics* (fourth edition, J. & A. Churchill); Dr. Macnaughton Jones's *Manual of Diseases of Women and Uterine Therapeutics* (Baillière, Tindall, & Cox); and Mr. Lawson Tait's *Diseases of the Ovaries*, are all valuable books. Other books which will be found useful are Dr. Galabin's *Student's Guide to Diseases of Women* (third edition, J. & A. Churchill); Hart & Barbour's *Manual of Gynæcology* (third edition, Johnston); Dr. Lewers' *Practical Text-book of the Diseases of Women* (H. K. Lewis); Dr. Halliday Croom's *Minor Gynæcological Operations and Appliances* (second edition, Livingstone, Edinburgh; Simpkin, Marshall, & Co.); Dr. Courty's work on the *Diseases of the Uterus, Ovaries, and Fallopian Tubes*, translated by Dr. Agnes Maclaren (J. & A. Churchill); Mr. Alban Doran's *Clinical and Patho-*

logical Observations on Tumours of the Ovary, Fallopian Tube, and Broad Ligament (Smith, Elder, & Co.); and Dr. Atlee's *General and Differential Diagnosis of Ovarian Tumours.*

Among text-books on Diseases of Children must be mentioned Dr. West's well-known *Lectures on the Diseases of Infancy and Childhood* (seventh edition, Longmans & Co.); Dr. Fleetwood Churchill's treatise on *The Diseases of Children* (third edition, Fannin & Co.); Dr. W. H. Day's *Manual on the Diseases of Children* (second edition, J. & A. Churchill); M. Guersant's *Surgical Diseases of Infants and Children*, translated by Dr. Dunglison (Smith, Elder, & Co.); Meigs and Pepper's *Practical Treatise on the Diseases of Children* (seventh edition, H. K. Lewis); Dr. Eustace Smith's *Practical Treatise on Diseases in Children*, second edition (J. & A. Churchill); Dr. J. L. Smith's *Treatise on the Diseases of Infancy and Childhood* (fifth edition, H. K. Lewis); Dr. Goodhart's *Students' Guide to Diseases of Children*, second edition (J. & A. Churchill); Dr. Tanner and Dr. Meadows' *Practical Treatise on Diseases of Infancy and Childhood* (third edition, H. Renshaw); Dr. Angel Money's *Treatment of Disease in Children* (H. K. Lewis); Mr. Edmund Owen's *Surgical Diseases of Children* (Cassell & Co.); and Steiner's *Compendium of the Diseases of Children*, translated by Mr. Lawson Tait (J. & A. Churchill).

SPECIAL SUBJECTS.

THERE are several good text-books of the special departments which are taught in the schools.

For students of Psychological Medicine, the chief work is Bucknill and Tuke's *Manual of Psychological Medicine* (fourth edition, J. & A. Churchill). There are also Dr. Clouston's *Clinical Lectures on Mental Diseases* (J. & A. Churchill); Dr. E. C. Mann's *Manual of Psychological Medicine and Allied Nervous Diseases* (J. & A. Churchill); Dr. W. H. O. Sankey's *Lectures on Mental Diseases* (second edition, H. K. Lewis); Dr. Blandford's *Lectures on Insanity and its Treatment* (third edition, Oliver & Boyd; and Simpkin, Marshall, & Co.); Dr. G. H. Savage's *Manual of Insanity and Allied Neuroses* (Cassell & Co.); and Dr. W. A. Hammond's *Treatise on Insanity* (H. K. Lewis).

For students of Ophthalmic Surgery, Mr. R. B. Carter's *Treatise on Diseases of the Eye* (Macmillan & Co.); Mr. Nettleship's *Student's Guide to Diseases of the Eye* (third edition, J. & A. Churchill); Mr. Macnamara's *Manual of Diseases of the Eye* (fourth edition, J. & A. Churchill); Mr. Wharton Jones's *Manual of Ophthalmic Medicine and Surgery* (third edition, J. & A. Churchill); Mr. George Lawson's *Diseases and Injuries of the Eye* (fifth edition, Renshaw); Dr. H. W. Williams's *Diagnosis and Treatment and Diseases of the Eye* (Sampson Low & Co.); Mr. B. T. Lowne's *Handbook of Ophthalmic Surgery* (Smith, Elder, & Co.); Mr. Juler's *Handbook of Ophthalmic Science and Practice* (Smith, Elder, & Co.); Mr. Higgens' *Hints on Ophthalmic Out-patient Practice* (J. & A. Churchill); Dr. C. F. Pollock's *Normal and Pathological Histology of the Eye* (J. & A. Churchill); and Mr. Swanzy's *Handbook of Diseases of the Eye and their Treatment* (H. K. Lewis), are books that will be useful. Accommodation has become almost a special subject, which the student must master, especially with a view of thoroughly understanding the value of spectacles in ophthalmic practice. Among the best works on accommodation are Dr. Landolt's *Refraction and Accommodation of the Eye and their Anomalies*, translated by Dr. Culver (Pentland); and Mr. Hartridge's *Refraction of the Eye* (J. & A. Churchill). Dr. de Wecker's *Ocular Therapeutics*, translated by Dr. Litton Forbes (Smith, Elder, & Co.), and Dr. Wolfe's work on *Diseases and Injuries of the Eye* (J. & A. Churchill), may be consulted with advantage. A second edition of a book by Mr. E. A. Browne, for instructing students *How to Use the Ophthalmoscope*, is published by Trübner & Co. A. *Manual and Atlas of Medical Ophthalmoscopy*, by Dr. Gowers (second edition, J. & A. Churchill), is a valuable work; Liebreich's *Atlas of Ophthalmoscopy*, edited by Mr. Swanzy (third edition), is also very useful.

In Aural Surgery, Sir W. B. Dalby's book on *Diseases and Injuries of the Ear* (third edition, J. & A. Churchill) is very good; there are also a book by Mr. G. P. Field on *Diseases of the Ear* (third edition, Renshaw); a *Manual of Diseases of the Ear*, by Dr. T. Barr (Maclehose, Glasgow; and Macmillan, London); a *Guide to the Study of Ear-Disease*, by Dr. P. McBride (W. & A. K. Johnston), and a *Handbook of Diseases of the Ear*, by Dr. M. Pritchard (Lewis); while Dr. Burnett's work on *The Ear: its Anatomy, Physiology, and Diseases* (second edition, J. & A. Churchill), and Dr. St. John Roosa's *Practical Treatise on Diseases of the Ear* (sixth edition, H. K. Lewis) are valuable and elaborate works. Dr. Macnaughton Jones has brought out a good *Practical Treatise on Aural Surgery* (second edition, J. & A. Churchill), and also a well-executed *Atlas of the Diseases of the Membrana Tympani and Auricle* (J. & A. Churchill). Dr. E. Woakes is the author of a useful practical work on Postnasal Catarrh and Diseases of the Nose causing Deafness.

Among works on Diseases of the Nose and Throat we have Mr. Cresswell Baber's *Guide to the Examination of the Nose* (Lewis); Mr. A. E. Garrod's *Introduction to the Use of the Laryngoscope*; also several useful works on Diseases of the Throat by Dr. Morell Mackenzie.

For the use of students in Dermatology, Mr. Malcolm Morris's *Manual of Skin-Diseases* (Smith, Elder, & Co.); and Dr. L. D. Bulkley's *Manual of Diseases of the Skin* (J. & A. Churchill), are very reliable guides. Sir Erasmus Wilson's *Treatise on Diseases of the Skin*, and his *Lectures on Dermatology* (J. & A. Churchill) are well-known and valuable works. Dr. R. Liveing's *Handbook on the Diseases of the Skin* (third edition, Longmans & Co.) is well deserving of recommendation; so also are Dr. McCall Anderson's *Treatment of Diseases of the Skin* (Macmillan & Co.); and Fox's Epitome of Skin Diseases (third edition, Renshaw). For reference, there are Fox's *Photographic (Coloured) Illustrations of Skin-Diseases and of Cutaneous Syphilis* (J. & A. Churchill); and an *Atlas of Skin-Diseases* by Dr. Duhring, of Philadelphia (Lippincott & Co.).

For students of Dental Surgery the following books are published by Messrs. J. & A. Churchill: Sir J. Tomes's *Manual of Dental Surgery* (third edition); Sir J. Tomes's *Manual of Dental Anatomy* (second edition); Taft's *Practical Treatise on Operative Dentistry* (third edition); Sewill's *Student's Guide to Dental Anatomy and Surgery* (second edition);

Stocken's *Elements of Dental Materia Medica and Therapeutics* (third edition); and Coles's *Manual of Dental Mechanics* (second edition). There are also a *Manual of Dental Surgery and Pathology*, by Mr A. Coleman (Smith, Elder, & Co.), and Barrett's *Dental Surgery for General Practitioners and Students of Medicine* (H. K. Lewis). Among larger works are Gorgas's *Dental Medicine* (J. & A. Churchill), and Harris's *Principles and Practice of Dentistry* (eleventh edition, edited by Dr. Gorgas, J. & A. Churchill).

FORENSIC MEDICINE AND HYGIENE.

As elementary works of convenient size, and containing valuable instruction, Dr. A. S. Taylor's *Manual of Medical Jurisprudence* (eleventh edition, J. & A. Churchill); Husband's *Forensic Medicine and Medical Police* (Livingstone); Guy and Ferrier's *Principles of Forensic Medicine* (Renshaw); and Dr. J. Abercrombie's *Student's Guide to Medical Jurisprudence* (J. & A. Churchill), are to be recommended. The more advanced student and the practitioner should consult Dr. Taylor's *Principles and Practice of Medical Jurisprudence* (third edition, by Dr. Stevenson, J. & A. Churchill); the *Handbook of Forensic Medicine and Toxicology*, by the late Dr. Bathurst Woodman and Dr. Tidy (J. & A. Churchill); Dr. Ogston's *Lectures on Medical Jurisprudence* (J. & A. Churchill); and the translation of Casper's *Forensic Medicine*, published by the New Sydenham Society. The last-named book describes the manner in which medico-legal investigations are carried out on the Continent. Dr. C. M. Tidy's work on *Legal Medicine* (Smith, Elder, & Co.) is a valuable book.

Under the head of Hygiene the principal books are Dr. Parkes's *Manual of Practical Hygiene*, edited by Prof. de Chaumont (sixth edition, J. & A. Churchill); Wilson's *Handbook of Hygiene and Sanitary Science* (fifth edition, J. & A. Churchill); Dr. A. H. Buck's *Treatise on Hygiene and Public Health* (Sampson Low & Co.); Prof. de Chaumont's *Lectures on State Medicine* (Smith, Elder, & Co.); Hart's *Manual of Public Health* (Smith, Elder, & Co.); and Hart's *Truth about Vaccination* (Smith, Elder, & Co.).

NEW MEDICINES AND NEW INSTRUMENTS

AT THE ANNUAL MUSEUM AT THE GLASGOW MEETING OF THE BRITISH MEDICAL ASSOCIATION.

THE show this year was decidedly above the average both in size and quality. Exhibitors seem to have understood that, in a large commercial city like Glasgow, the play would be worth the candle and they entered boldly into the competition for public attention. It must be acknowledged indeed that there are few better opportunities of bringing new products and instruments to the notice of members of the profession. Instead of having to send travellers to bring before them the novelties and innovations, the members come to learn and are, for the most part, as anxious to be informed, as the vendor is to impart the information. The medical man is often already cognisant of the existence of this or that drug or instrument, by the advertisements in his medical journal which, it must not be forgotten, are often as useful to the practitioner, as the more strictly scientific contents.

The exhibits were contained in two spacious rooms and a marquee. The 'Foods and Drugs' occupied the Examination Hall, with an overflow into the marquee. The first exhibit met with on mounting the grand staircase was that of Messrs. RICHARDSON & CO., of Leicester. Although outside the museum proper, it was admirably situated to show off to the best advantage their comprehensive and tastefully-arranged stand. The first thing to notice was their dispensing cabinet, a handsome article of furniture, which, while an ornament to any consulting-room, contains all the drugs and appliances which a dispensing practitioner could desire. The firm are well known for their soluble pearl-coated pills and granules, which are known wherever pills are taken, and they made an unusually good show of medicated pessaries, suppositories, bougies, and cones. In addition to the usual fluid extracts, they provide the fluid extracts of the U. S. P., many of which do not figure in our own. It is impossible to do more than allude to the numerous elegant and ingenious combinations in the form of colonists' medical chests and emergency cases which were exhibited, and it is probably unnecessary to do more in respect of the hypodermic wafers and ophthalmic discs, &c.

The exhibit of another well-known firm, that of Messrs. FERRIS, BOORNE, TOWNSEND, & BOUCHER, of Bristol, was the next to claim attention. They have a number of special preparations worthy of remark, notably the Syr. Hypophosph. Comp., a tasteless fluid extract of Cascara Sagrada and a granular effervescent antipyrin. In the surgical instrument department the firm has a good selection of the instruments used by Dr. J. Greig Smith in abdominal operations, as well of those required for the electrical treatment of fibroid tumours of the uterus after the method of Dr. Apostoli. We must not omit to mention their syringes for the rectal injection of glycerine, the new and convenient method of overcoming constipation.

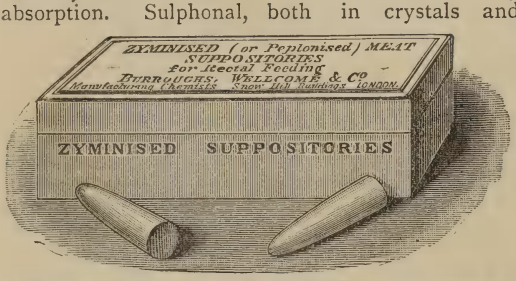
A familiar feature at most exhibitions of pharmaceutical products is the exhibit of the 'Hamburg' Hoff's Malt Extract. It comprises only one article—a liquid extract of malt—but as it is singularly agreeable to the palate, and possesses special tonic and invigorating qualities, it appeared to be highly appreciated by the visitors to the museum.

The Essence of Beef and Concentrated Beef Tea of Messrs. GEORGE MASON & CO. are well-known products, which are extensively resorted to in the invalid dietary. They are palatable, easily prepared, and possess all the stimulating and nutritious qualities of carefully manufactured meat extracts. Their concentrated meat lozenges and turtle soup for invalids, are worthy of every commendation. Their English-made beef-tea bouillon is also a valuable and nutritious preparation.

Very conspicuous, in the centre of the section, was the exhibit of those indefatigable pharmaceutists, Messrs. BURROUGHS, WELLCOME, & CO. Always surrounded by a busy throng of inquiring visitors, their representatives must have had a fatiguing week's work. Their digestive ferments and peptonising powders, &c., are too well known to call for special mention; but they had several novelties in the way of drugs and appliances which excited a good deal of interest. In *Eucalyptia*, the vola-

tile essential oil of the *Eucalyptus globulus*, we have a fragrant and agreeable substance for use as an inhalation, alone, or in conjunction with their chloride of ammonium inhaler, which was in full swing at each corner of the exhibit. It may also be

used with their new dry pocket inhaler, a tiny and convenient form for medicated inhalations. The triturates, which they have recently introduced in tabloid form, constitute a remarkably elegant series of preparations, calculated to maintain the reputation of the firm for tasteful (and tasteless !) pharmaceutical products. They are intended to enable the practitioner to turn to account the increased activity of divided doses. The neat and compact cases of tubes of tabloids for internal administration were much admired. The zyminised suppositories afford an easy means of rectal alimentation with ready absorption. Sulphonal, both in crystals and



tabloids, is the latest addition to the list of hypnotics. They had an excellent display of pocket cases for hypodermic medication. In a tiny case, easily put into the waistcoat pocket, the medical man carries most of the potent drugs ready dosed. He is prepared for all emergencies ; with one of them in his pocket he can meet with an equable countenance a case of uterine hæmorrhage, one of poisoning, or one of hepatic colic, &c.

Messrs. CORBYN, STACY, & CO. exhibited a series of therapeutical and pharmaceutical novelties, comprising all the latest additions to the unofficial pharmo-vocabulary. Their 'Champagne Coca' is a highly satisfactory blend of the exhilarating qualities of the wine with the tonic and stimulating properties of the plant.

Messrs. T. CHRISTY & CO. were present with a liberal supply of samples of various more or less rare medicinal substances. This enterprising firm generally does pioneer's work in the matter of therapeutical innovations, and the mere enumeration of their novelties would constitute too bold a demand on our space. This collection is the nursery ground of the pharmacopœia of the future.

Messrs. ALLEN & HANBURY, though their exhibit was not as extensive nor as gorgeously attired as some of the other great firms, had, nevertheless, an extensive show of products, new and old, for which they are famous. Their tasteless preparations of Cascara Sagrada are positively delicacies. Far more important, however, from a therapeutic point of view, are their liquid digestive preparations. We have already had occasion to testify to the activity of their Byno-Pepsin and Byno-Pancreatin, which are combinations of pepsin and pancreatin with the diastase of malt whereby the useful qualities of both are available. Their Bynin is a concentrated liquid extract of malt of standard merit. They have also a Malted Farinaceous Food, very carefully prepared, with which we have long been familiar. The series of medicated throat pastilles is remarkably comprehensive, and constitute a distinct improvement on the ordinary hard rough lozenge. Space forbids us to do more than mention their capsules of nitrite of amyl and iodide of ethyl and their tasteless castor-oil. The latter ought to replace the crude drug for persons of average fastidiousness.

Among nutritive preparations with a meat basis we must note PEARSON'S very stimulating and agreeable 'Liebig's Beef Wine' manufactured by the Liebig's Wine Company. Of this there are several varieties with port wine, and with or without malt, quinine, and iron, or pepsine. There is also a non-alcoholic preparation of beef, malt, and quinine, in grape juice. Happy the invalids who can command such luxuries !

The Australian wines of Messrs. BURGOYNE & CO., though not strictly medicinal, are largely employed for their valuable properties in cases in which alcohol is indicated. In these days of manufactured clarets and spurious Burgundies, it is useful to be able to draw upon natural wines from regions where the phylloxera is unknown. They may be had of every strength, colour, and quality, although, as regards the latter, the lowest attains a high standard of excellence.

Messrs. ARMBRECHT'S Coca Wine is probably not surpassed by any preparation of the kind. It has a delicate flavour, and may be relied upon to possess all the tonic and invigorating qualities of the coca plant.

Messrs. HEWLETT & SON displayed the various preparations for which their firm is known. It is probably unnecessary to do more than enumerate the principal among them—the Liq. Ergotæ Purif., an active preparation of constant strength, the Syrup of the Hypophosphites, clear and stable ; the Liq. Santhal Flav. *c.* Buchu et Cubeba, an invaluable and agreeable formula in the treatment of gonorrhœa, and their Mixt. Pepsinæ Co. *c.* Bismutho, an admirable compound in irritative forms of dyspepsia.

Messrs. LORIMER & CO. exhibited their Coca Jelly for use in the treatment of excessive sickness during pregnancy ; a specially prepared compound syrup of the hypophosphites and others of Witch hazel, coca, codeia, &c. They are probably without a rival in so far as their special preparations are concerned. Their Codeia Jelly is a valuable substitute for morphine or the bromides.

Messrs. STERN'S pine products were well to the front. The fragrant pumiline essence and extract are now employed at the Farnborough Hydrotherapeutic Establishment and elsewhere, in conjunction with Russian and Turkish baths, for the treatment of chronic pulmonary affections, rheumatism, &c. They are, however, well adapted for use at home, by means of dry or moist inhalation apparatus and in hot baths. The pine essence is also made up into jujubes and soaps for throat and skin affections respectively.

Messrs. WM. R. WARNER & CO. had a very handsome exhibit of pills and parvules, for which Messrs.

Newbery & Sons are the agents. This firm have brought the manufacture of pills to perfection, and their schedule of formulæ ought to meet every possible and conceivable requirement. Their Bromo-soda possesses many advantages over the bromide of potassium, being free from the depressing effects of potassium salts generally.

Messrs. SCHACHT & CO. showed some very useful preparations, notably their Dialysed Ergotine for subcutaneous injection, and their Liquor Ferri Albuminatis, free from the styptic, disagreeable taste of most ferruginous medicines. They are, also, the agents for the Kronenquelle Water, renowned in the treatment of maladies consequent on the uric acid diathesis.

In an exhibition comprising mineral waters, Messrs. INGRAM & ROYLE would naturally come to the front. They are agents for most of the best known waters, including the Carlsbad water and salts, Contrexéville, German seltzer, Æsculap, &c., the curative effects of several of which have been affirmed by the experience of centuries.

The APOLLINARIS COMPANY had an exhibit all to themselves, but the universal reputation of these waters is the best evidence of the fact that their use is both healthful and popular.

Messrs. BRAND & CO. have made their reputation in the production of reliable dietetic specialties in the form of meat essences, jellies, extracts, &c., all of which were shown. Their success is a sign of the times, and indicates the importance which is now attached to dietary as a factor in treatment.

Somewhat in the same department, Messrs. CARNIER & CO. exhibited in conjunction with the Maltine Manufacturing Company. Their products are wholly or partially pre-digested, and are therefore well adapted for patients whose digestive powers are deficient.

Messrs. GREEN, CHARLES, & CO. exhibited their hypodermic solutions of guaranteed permanence to the number of forty. Their stability and clearness have been fully tested; a convenient and ready form of carrying this form of medicament. Their Liquor Copaibæ is also an excellent pharmaceutical product, free from the objectionable taste of the drug. The Liquor Ergotæ and Liquor Pepsinæ are both active and reliable preparations.

The MALTINE MANUFACTURING CO. showed samples of their maltine and maltine with cod-liver oil, both of which are standard preparations.

Mr. SACKER exhibited his compressed pellets of the various drugs, together with family medicine cases and obstetrical satchels, neatly and compactly arranged, also the soluble pills and granules, in large numbers, of Messrs. Schieffelin & Co., of New York.

Mr. DE ST. DALMAS, of Leicester, exhibited his well-known and varied selection of plasters. Their adhesive qualities are all that can be desired.

The exhibit of the SANITARY WOOD-WOOL CO. afforded visitors an opportunity of examining a very excellent innovation in surgical dressings. The absorbent powers of the wood-wool are nothing less than remarkable, and must be tried in order to be thoroughly appreciated; moreover, it possesses deodorising and disinfecting properties in contact with the discharges, and it lends itself to a large number of applications, both domestic and medical —wood-wool sheets for accouchements, napkins for babies, &c. Their *lotiforms*, for the speedy preparation of titrated solutions of the sublimate, for disinfecting purposes, enable the nurse to be trusted with the preparation of the solutions.

Messrs. SAVORY & MOORE had a very good display of pharmaceutical and dietetic products and apparatus, together with cabinets for analysis of air, water, &c., medicine chests suitable for travellers and missionaries, and the various regulation appliances for the Army and Volunteer Services.

The ALLEN SURGICAL PUMP is probably still far from generally known. It is a simple and ingenious contrivance, whereby fluid may be pumped into or aspirated from by merely turning a handle. It is eminently portable, and should (as it doubtless will) prove a great success.

The CHEMICAL CARBON CO. are the manufacturers of the ingenious Carbon Cones for surgical, medical, and disinfecting purposes. These must not be confounded with the old pastille, from which they differ *in toto*. The material to be volatilised is contained in a small flask, which is surrounded by a hollow cone of carbon mounted on an incombustible base. When the carbon is made to burn the heat at once disengages the vapours. They constitute a remarkably simple and satisfactory means of producing vapours for inhalation, disinfecting, and antiseptic purposes (*see* page 415).

SECTION E.

Messrs. ARNOLD & SON, of London, showed a varied collection of the most recent instruments for gynæcology, lithotrity, ovariotomy, &c., with a large selection of admirably finished eye instruments. Several models of uterine dilators were on exhibit. Among the novelties were—Pearse's Membrane Aspirator for Diphtheria, Ward Cousin's New Pelvic Tourniquet, and M'Munn's Midwifery Forceps.

The ANGLO-AMERICAN ARTIFICIAL LIMB COMPANY, of London, exhibited a working model of their artificial legs, which are automatic in action. No one would have suspected that their representative himself was wearing one, walking being as elastic and as firm to all appearances as with the natural limb. They have similar arrangements for arms and hands, with finger, wrist, and elbow movements, together with extensions for shortened limbs.

The ARGYLE RUBBER COMPANY, of Glasgow, exhibited various instruments in steel, gum-elastic, gutta-percha, India-rubber, and celluloid; also a good assortment of impermeable materials at remarkably low prices.

Mr. CHURTON, of Leeds, showed his mechanical telephone, which is a simple and ingenious contrivance for the transmission of articulate speech. It is cheap, and is now in very general use in large institutions.

Messrs. COXETER & SON, of Grafton Street, London, exhibited a complete set of electrodes, batteries, galvanometers, rheostats, &c., for the electrical treatment of uterine fibroids by Apostoli's methods. Also a tray battery for illuminating purposes.

Messrs. LYNCH & CO., of London, exhibited their Improved Hypodermic Syringes, which cannot get out of order; various models of speculums, pessaries, &c., also their new improved syringes for injection of glycerine. A notable feature in their exhibit was their new portable pure silk air pillow, which, though very small and light, makes, when inflated, a strong, soft pillow for travellers, &c.

In the Hall below, was a REMINGTON TYPEWRITER, the young lady in charge of which found

plenty of opportunities of showing the rapidity with which letters, &c., can be written by its help.

Messrs. MAYER & METZLER exhibited their electric light for laryngeal and vaginal examinations. Its use in laryngoscopic work is fairly common, but it is even more peculiarly adapted for exploring such a cavity as the vagina, the innermost recesses of which can be illuminated by this handy little light, passed in through a speculum. It has the very great advantage of necessitating the smallest possible amount of exposure. They also showed a cautery battery, for use in conjunction with the above, and separately. They had a comprehensive collection of laryngeal and nasal instruments, a new form of bed-rest, &c.

Messrs. PICKARD & CURRY displayed a selection of intruments and apparatus used in ophthalmic practice, of remarkable finish and delicacy.

The SANITAS COMPANY showed a number of disinfecting preparations and apparatus for fumigating, &c., also Kingzett's powerful peroxide of hydrogen bactericides, the efficacy of which we have had an opportunity of putting to the test.

Mr. SCHALL, of Wigmore Street, London, had a very large display of electrical batteries, instruments and apparatus comprising batteries and accessories for the constant and the interrupted and the Faradic currents, galvanometers, electro-motors, statical machines, &c.

Messrs. WEISS & SON, of Oxford Street, London, exhibited an extensive collection of the latest and most modern forms of instruments and appliances, the careful finish of which sustained the reputation enjoyed by the firm in this respect.

Messrs. HILLIARD & SON displayed a series of improved appliances, including their patent spinal extension apparatus, Allen's surgical pump and oxygen atomiser, Dr. Macewen's spinal instruments, and others.

Messrs. DARTON & Co., of London, exhibited a selection of microscopes, thermometers, electric bells, batteries, &c.

Messrs. DOWN BROTHERS, of the Borough, had a very tastefully arranged exhibit, comprising the most useful and improved models of surgical instruments. They were specially well provided in the matter of lithotrity and lithotomy instruments, pedicle clamps, inhalers, &c., also the apparatus for carrying out Apostoli's treatment.

Mr. GARDNER, of Edinburgh, made a very good show, bearing more particularly upon instruments devised or modified by Edinburgh surgeons and obstetricians. This collection of ovarian instruments, and appliances for special practice, eye, ear, nose, &c., was remarkably complete.

Messrs. GODFREY & COOKE, of London, showed their new chloride of ammonium inhaler, a simple apparatus, not likely to get out of order, even in unskilled hands.

SECTION F.

In the Sanitary Department the ARGYLE RUBBER CO. had a large assortment of India-rubber, air, and water beds, cushions, pillows, &c.

Medical Broughams were exhibited by ROBERTSON, of Glasgow, and HENDERSON, of Glasgow. MORRELL'S SANITARY CO., of Manchester, showed Morrell's Patent Ash-Sifting, Earth-Closet system, &c. Various interesting objects were shown by the ASYLUM FOR THE BLIND, of Glasgow; stretchers, litters, &c., by the ST. ANDREW'S AMBULANCE ASSOCIATION, of Glasgow; a new fever ambulance, by Dr. ALLAN, of the Glasgow Fever Hospital; and invalid beds and couches by ISAAC CHORLTON & CO., of Manchester.

Messrs. R. BOYLE & SON, of London and Glasgow, showed models of automatic, concealed roof, ridge, and other ventilators; fresh air warming apparatus and up-draft chimney cowls, &c.

Messrs. DOULTON & CO. exhibited their well-known models for closets, lavatories, &c., the general excellence of which has long been appreciated by the public who devote any attention to sanitary matters.

We may mention, *inter alia*, the 'Lightning Geyser' of Messrs. EWART & SON, whereby a hot bath can be obtained at a few minutes' notice at a minimum of expense; HOBB'S Anti-tannic Infuser, for making tea without an undue allowance of tannin.

Mr. GEORGE JENNINGS, the well-known Sanitary Engineer, of London, exhibited a series of sanitary appliances of a very high standard of merit for closets, urinals, &c., both for public and domestic use; also a dissecting table with head-rest, warming and ventilating arrangements, &c.

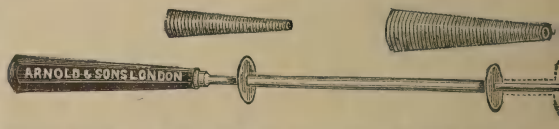
The LONGFORD WIRE, IRON, AND STEEL COMPANY showed their unsurpassed galvanised spring steel-wire mattresses, which for strength, healthiness, and comfort are fast putting all other descriptions of mattresses out of the market. Being easily cleaned and not lending themselves to accumulations of dust or dirt, they are admirably adapted for use in hospitals—in fact, no other sort should be permitted in institutions where the comfort and health of their patients are really taken to heart.

Messrs. MANLOVE, ALLIOTT, FRYER, & CO. exhibited a collection of apparatus for the treatment and utilisation or destruction of sewage, with photographs, drawings, &c.

NEW INVENTIONS.

NEW SPIRAL WIRE STEM FOR PRESERVING THE PATENCY OF THE CERVICAL CANAL, AFTER THE OPERATION OF DIVISION FOR STENOSIS.

DR. DUKE, of Dublin, the inventor of this stem, points out that the tendency of the os and cervical canal to contract rapidly after the operation for stenosis (with a view to the cure of dysmenorrhœa and sterility) must have been observed by every gynæcologist. There are various means adopted to counteract this tendency; some advise the daily introduction of the uterine sound, but this he believes



gives rise to a great deal of irritation and sometimes hæmorrhage, any newly-cut surface resenting such interference. The pain produced by the proceeding is sometimes described by the patient as worse than the operation itself, and certainly likely, to say the least, to set up metritis, parametritis, and subsequent cellulitis.

Others advise the use of Greenhalgh's India-

rubber stem, of which the disadvantage is the difficulty of introduction; the sound frequently finding its way either through one of the openings near the point or right through the point itself. Again, the liability of the side opening to become filled up with clots or discharge, and so preventing drainage of the uterine cavity, thus neutralising one of the principal points of value in the operation. Others cauterise or paint with iron solution or other styptic the newly cut surfaces, and this, though successful in some cases in preventing union, has the disadvantage of aiding by its styptic action the subsequent contraction of the canal. Some practitioners plug the vagina directly after the operation with the twofold object of preventing hæmorrhage, and, by distending the vaginal walls, press the divided parts asunder and so prevent union. This plan also gives rise to a good deal of discomfort, retention of urine frequently following, and the removal of the plug and renewal of same for some time afterwards is anything but pleasant for either patient or doctor. Dr. Duke points out that the apparently simple plan of plugging the cervix itself is not so easily accomplished as one would think, and the Greenhalgh stem, though acting well in some cases is very liable to be expelled by uterine action unless supported by vaginal tamponnage, the disadvantages of which Dr. Duke has already alluded to.

After some trouble he has endeavoured to design a simple means of keeping the cut surfaces apart, and at the same time allowing free exit for the uterine secretions by a stem of spiral wire (nickled), which he finds is well retained till the parts are fairly healed, and being of a flexible and yielding nature is well tolerated by the patient if the proper sized stem be chosen. He generally allows it to remain *in situ* for a week or ten days, the syringe being used daily for that time during healing process. The stems are made in various sizes, and Dr. Duke finds it useful to have a very large one, as thick as the index finger, for keeping the os and cervical canal open for some time after rapid dilatation has been performed for subsequent exploration of the cavity (which operation is now taking the place of the slow and unsafe process of expansion by sponge tents or sea tangle). There can be no difficulty in removing the stems by grasping the last strand of wire at the side by the dressing forceps, and rotating it from right to left, unscrewing it, as it were, from above downwards.

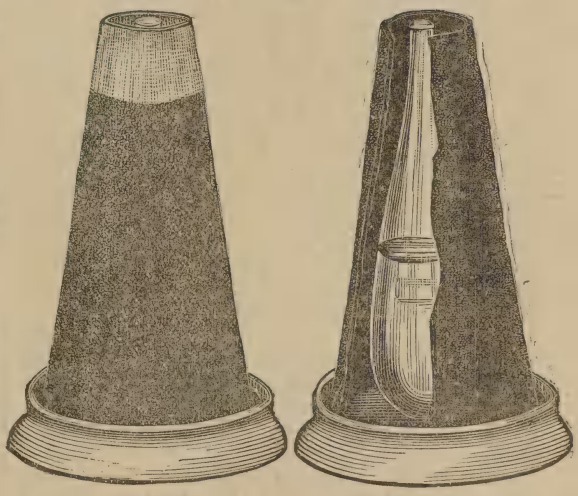
The one introducer as sold with stems does for all. The makers are E. Corcoran, Dublin, and Messrs. Arnold & Sons, London.

CARBON CONES.

One of the most noteworthy exhibits at the annual museum of the British Medical Association at Glasgow was that of the Chemical Carbon Company, 62 Holborn Viaduct, the manufacturers of surgical, medical, disinfecting, and perfuming vapour cones. These constitute a distinct advance on the varieties of combustible disinfectants, &c., hitherto produced, and merit special mention, not only on account of their variety but also of their usefulness and the wide field of applications to which they lend themselves. The company have been good enough to place a large assortment of these cones at our disposal for observation and experiment, and we are glad to have an opportunity of publishing the results of our experience with them.

It may be as well to begin by describing these cones, which differ entirely from the ordinary medicated pastilles hitherto sold. Indeed, beyond the fact that they are consumed in the course of the operation, they present no point of resemblance. They consist of a small thin glass flask, in which is enclosed the particular substance (or substances) which it is desired to vaporise. This flask is placed within a hollow cone of carbon, the object of which is to provide in a simple, easy manner the necessary heat. The cone is fixed to a disc of clay or earthenware to prevent any chance of fire. All one has to do is to apply a match to the upper margin of the carbon cone, which then smoulders away, and disengages the vapour from the interior of the flask. It would be difficult to imagine a contrivance more ingeniously arranged, or better adapted to fulfil the objects for which they are intended.

The cones, which are manufactured in great variety, are of several categories. There are, first the medical cones for general air distribution or direct inhalation. These comprise cones for oxygen gas, which is given off in proportions of from 500 to 5,000 cubic inches. That may be collected in bags if desired, for direct inhalation, and as the oxygen treatment is now largely employed in cases of diabetes, eclampsia, and phthisis, they will simplify and extend its employment. The treatment of winter cough, chronic bronchitis, asthma,



&c., is provided for by vaporisation of pure terebene or terebene and iodine, either for general fumigation or direct inhalation. The carbolic acid cones are calculated for diffusion of the vapours over 1,000 cubic feet, and form the simplest and handiest method of disseminating the drug in cases of whooping-cough (in which it constitutes one of the best methods of treatment), the infectious fevers, and diphtheria. It is also made up in combination with iodine, the medicinal value of which is very great in suitable cases. Another inhalation for the treatment of whooping-cough is the bromo-eucalyptol. The attacks in the one case in which, at that season of the year, it was impossible to try it, were notably diminished in frequency.

As no one medication can be relied upon to relieve all the manifold cases of bronchial catarrh, hay-fever, asthma, and the like, the practitioner can choose between cones containing pinus sylvestris, eucalyptus pur., pix liquida, creosote and ammonium

benzoas, asthma being more especially provided for with the stramonium and nicotine cones. In the lying-in room few disinfectants and deodorisers could be more grateful to the patient and healthful than the thymol and lavender cones, of which one will saturate 1,000 cubic feet. Vocalists and others suffering from hoarseness or bronchial irritation can utilise the chloride of ammonium cones by direct, intermittent inspiration; while the fœtor of ulcerative tonsillitis aphthæ may be overcome by the vapour of the sulphurous acid cones, also for direct intermittent inspiration. Lastly, where mercurial inhalation is prescribed, the hydrarg. sulphuret cones afford an easy means of carrying out the treatment, vastly preferable in many ways to the stab of the hypodermic needle or the gastric irritation caused by mercurial administration by the mouth.

Other cones are specially designed for the external application of vapours for baths. They contain calomel, red oxide, green oxide, with the bisulphate, mercuric chloride, and sulphur, and, lastly, sulphur. We have not had an opportunity of putting these to a practical test, but we have ascertained that they enable the practitioner to apportion the doses with perfect accuracy and confidence.

The disinfecting cones for house and chamber use, while possessing the full powers of the particular disinfectant employed, are at the same time rendered agreeable by the presence of a perfumed adjuvant. They are made in two sizes, for large and small air spaces. They thoroughly saturate the room and its contents, when properly exposed to the effect of the dense clouds of vapour which are given off. These cones are also prepared without any perfume, for use in hospitals, infirmary wards, and large air spaces. The chlorine cones are calculated at the rate of one for every 800 or 1,000 cubic feet space, and are not so strong as to give rise to any inconvenience if the air be breathed by patients who are not suffering from any acute inflammatory conditions of the lungs. One a day in a cancer ward, for instance, will ensure the absence of bad smells for a minimum of twenty-four hours.

The iodine cones should only be used in empty rooms or wards—that is to say, the patients must be removed before they are made to burn. The same precaution applies to most of the cones of this series, the vapours from which, intended as they are to secure perfect disinfection and the destruction of insects, would be far too powerful for inhalation. We have tried these in a large number of cases with perfectly satisfactory results.

When rooms in which cases of small-pox, scarlet fever, typhus fever, &c., require to be thoroughly disinfected under the personal superintendence of the medical man or sanitary officer, the *germicide cones* are most reliable. These contain either mercuric chloride or sulphurous acid. It is hardly necessary to add that the same precautions must be taken when they are used, to prevent accidents, as are necessary whenever powerfully irritating or toxic agents are employed for these purposes.

Apart from the cones for purely medicinal purposes, there is a great variety of *perfume cones* of every description. These for obvious reasons are more easily tested than those requiring special cases or opportunities, and have afforded us every satisfaction.

In order that medical men may, if they wish, prepare their own disinfecting agents, the flasks are also sold empty with the carbon cases and firebrick bases at 30*s.* and 54*s.* the gross.

A report on these cones might very appropriately be headed 'Disinfection made Easy,' for they constitute a marked improvement on the shovel full of hot coals and the bucket of water employed by our ancestors. The method of treatment by medicated inhalations should receive an impetus now that the obstacles to their use have been removed or overcome. As the result of an elaborate series of experiments we can safely predict that these cones have met a public want, and will meet with a favourable reception at the hands of the profession and (under medical supervision) of the public.

CELLULAR CLOTH BANDAGES.

WE have received specimens of the cellular cloths manufactured by the Cellular Clothing Co., Limited, (75 Aldermanbury, London). The texture is already in use for bandages, and makes bandages which offer considerable advantages over the ordinary harsh calico. It is light, soft, and of an open texture, and it adapts itself beautifully to the limb, besides being distinctly neat, and even elegant. They also wash well without shrinking.

MESSRS. PHILIP MORRIS & CO.'S CIGARETTES.

THE recent correspondence and controversy on the danger of throat disease attacking smokers of cigarettes, through the presence of opium or alkaloids in the tobacco from which they are manufactured, has induced us to submit a box of cigarettes manufactured and sold by Messrs. Philip Morris & Co., of 22 New Bond Street, to a careful chemical analysis. We have pleasure in stating that, as the result of our experiments, we fail to discover the presence of opium or any alkaloid foreign to tobacco. The tobacco is of fine flavour and quality, and great care has evidently been exercised in its selection and preparation.

DIETETIC PREPARATIONS.

SPARKLING WINES.

CHAMPAGNES.

THE increase of the duty on bottled sparkling wines imported into the country of the value of 30*s.* and upwards per dozen bottles in bond, recently imposed by the Chancellor of the Exchequer, has caused considerable friction in the wine trade, and especially amongst champagne drinkers, as it affects that wine more than any other, because sparkling wines cannot be bottled here. It is a matter of considerable moment to the physician that he should be enabled to obtain the pure juice of the grape, and that at a moderate price. So far as can be at present seen, the effect of the advance is likely to operate prejudicially in this respect. A cheaper class of wine is being brought forward to the detriment of sound, medium-priced wines, which, although having to pay the higher rate of duty, are much lower than those popular brands we see so extensively advertised. As the medical man has to take into consideration the means of his patients when ordering such adjuncts to his treatment, and as a large number of people cannot afford to pay the now extra high price of the popular brands, a

wine is wanted at a moderate price, of a sound and reliable character, that may be safely recommended for the use of invalids.

At the suggestion of some of our subscribers we have during the last month subjected a considerable number of champagnes to analysis, with a view to test their purity and suitability for medical purposes, and we have met with much value in brands that are not so well known as those just alluded to, wines of moderate price, yet containing all the character required.

After careful and exhaustive tests we give our preference to the wines of Messrs. Henriot & Co., of Rheims (London agents, Messrs. Blandy, Bros., & Co.), the well-known Madeira shippers of New London Street, E.C. Our analyst, assisted by several experts, says of this wine—Le Premier Extra Sec. 1884:—The alcoholic strength is about the same as in all good brands of champagne.

There is not an excess of sugar, and this, together with the general results of the analysis, indicate that the wine has been carefully fermented from the best quality grapes.

Its exceptional purity and excellent quality render it specially suitable for invalids, and its bouquet and delicate taste recommend it as a high-class champagne.

There are several other brands, to which we shall refer in our next issue.

MELLIN'S FOOD COMPANY FOR INDIA.

THE formation of a company for the manufacture of this well-known and popular infants' food for our great dependency forcibly demonstrates the confidence felt by its promoters in this old-established preparation. This step has been taken at the instance of some gentlemen acquainted with the requirements of Indian life, and Sir Guyer Hunter, M.D., M.P., late chief of the army medical department, and principal sanitary authority of Bombay, has been appointed chairman. Mr. Mellin has disposed of his rights for the manufacture of the food for India to this company. It is, we believe, intended still to manufacture the food in England, that it may secure the benefit and assistance of those conversant with the mode of preparing it, for it is in the precise manipulation of the ingredients used, more than in the materials themselves, that Mellin's food excels. Widely as this preparation is known, and largely as it has been sold throughout England, America, and other countries, there are large numbers of people who are probably not aware of its especial features, and in these days when artificial foods appear to be more than ever necessary for the rearing of infants, it is a matter of considerable moment to all concerned, that the nearest approach to natural food should be used. For the information of those unacquainted with it, it may be as well to state that Mellin's food is a different composition to any other now before the public. It is a brownish, granulated powder, soluble in water, and is made from wheaten flour, coarsely-broken malt, and carbonate of potash, introduced with water into a large digester, and allowed to go through Liebig's process, by which all the starch is transformed into dextrine and grape sugar; it is then strained through several sieves, in order to separate all the husks, bran, and inert portions of the malt, which constitute more than half of the cereals employed, and is finally evaporated to dryness *in vacuo*. It will thus be seen that Mellin's is to a great extent a pre-digested food, the digestive energy of the child being concentrated upon the transformation of the albuminous constituents of the milk. The powder is mixed with a certain proportion of water and cow's milk, and, as will be readily understood, the introduction of the carbonate of potash is intended to neutralise the action of the cow's milk, and the gluten minerals and phosphates replace what has been lost by dilution of the cow's milk. But a very important feature in Mellin's food, beyond what we have mentioned, is that, like the mother's milk, it is 'alkaline' and not 'acid' in its reaction, and in this it differs from other foods, and is as easily assimilated as natural food. It is also admirably adapted for invalids. An analysis made by the late Mr. G. W. Wigner, F.I.C., F.C.S., President of the Society of Public Analysts, &c., gives the following results :—

Moisture	3·76
Fat	0·16
*Albuminoid matters	5·43
Dextrose, Dextrine, Maltose, &c., soluble in water	86·90
Cellulose	0·22
Ash	3·40
Undetermined matters	0·13
	100·00

*Containing nitrogen ·869 per cent.

The microscopical examination shows that all the starch is destroyed, or converted into soluble compounds, and this is further proved by the fact that there is no coloration with iodine.

I find that the samples of Mellin's food for infants and invalids are of very high excellence, both as regards the raw materials and the mode of manufacture. Mellin's is not a mere starch or sugar food, like so many that are now sold, but it is a soluble preparation containing proper proportions of those nitrogenous and phosphatic matters which are essential for the healthy growth of a child, but are not easily obtained in prepared foods as usually sold.

This food is well malted, and I have not met with any similar article in which such complete solubility has been obtained. It is not only readily digestible itself, but it actually assists to digest milk or other foods with which it is mixed. Its flavour is highly palatable.

I have made a careful experiment on its actual feeding qualities, and am thoroughly satisfied with the results.

Its daily use would be of great value in the case of feeble infants who cannot digest ordinary starchy foods and it is a most useful addition to the diet of healthy children. G. W. WIGNER, F.I.C., F.C.S.

Mellin's food factory is The Marlborough Works, Peckham, S.E.

BRAND & CO.'s BEEF BOUILLON.

THIS article is introduced by Brand & Co. for the purpose of providing in a cheap and portable form a nourishing and palatable beverage, which can be at once made in an ordinary cup by the simple addition of boiling water, in the proportion of one teaspoonful of the 'Bouillon' to a breakfast cup, at a very moderate cost. The whole of the ingredients used in its manufacture are guaranteed by the makers to be of the finest possible quality. The flavour we can testify to be more agreeable than that of any article of the kind with which we are acquainted, and we have found it to be both stimulating and restorative.

COLEMAN'S LIEBIG'S EXTRACT OF MEAT AND MALT WINE.

MESSRS. COLEMAN & CO., LIMITED, of St. George's, Norwich, and 3 New London Street, E.C., have for many years been manufacturers of a meat and malt wine, with which a certain quantity of port wine has been incorporated. This preparation has gained great favour both at home and abroad, and has been prescribed very largely by medical men. Messrs. Coleman have now introduced their speciality in a non-alcoholic form, and in this effort they have succeeded in a satisfactory manner. The liquid used is the pure juice of the grape in which fermentation has been arrested by a patented process. The combined preparation has an agreeable flavour, the presence of the meat extract being palpable to the palate after the wine has been drunk. For invalids and delicate children, it will be found nutritious, flesh-forming, and invigorating.

SCOTTISH NECTAR, OR THE UAM VAR SCOTCH WHISKY.

WE have received from Messrs. Innes & Grieve, Edinburgh, a sample of this fine old Scotch whisky, which we have subjected to analysis, with the following results :—

Total solid matter (colouring)	0·16	per cent.
Absolute alcohol (by weight)	43·05	,,
= to proof spirit	88·70	,,

Fusel oil absent.

This whisky has been submitted to careful chemical analysis. It is free from fusel oil and other deleterious substances frequently found in new whisky. It is well matured, and of pure quality and flavour, and we can recommend it as a pure and wholesome spirit. It is full of alcoholic strength.—R. H. HARLAND, F.I.C., F.C.S., Public Analyst.

NEW PREPARATIONS.

MESSRS. PARKE, DAVIS, & CO.'S PREPARATIONS.

WE have received a number of samples of the various products manufactured by Messrs. Parke, Davis, & Co. The 'Normal Liquid Foxglove' is one of a valuable series of preparations, one litre of which represents a kilogramme of the standard drug. Absolute uniformity may thus be relied upon and one element of uncertainty in therapeutics is thereby obviated. Titration of pharmaceutical products is a desideratum, a fact which has only recently met with recognition.

Hematic Hypophosphites is in reality a compound syrup of the hypophosphites of iron, manganese, quinine and strychnine. The utility of this particular combination has been fully recognised, and this preparation is only a carefully prepared imitation of the well-known proprietary article.

The Syrup Trifolium Compound is a medicament which has been very extensively employed of late years in the treatment of the various manifestations of syphilis, and in obstinate skin affections of a strumous nature with very great success. It is reported to render the employment of mercury unnecessary, a manifest advantage if the claim be substantiated, seeing that mercury is by no means an unqualified benefit.

Pharmacists have generally recognised the necessity of mitigating the nauseous bitterness which is a drawback to the use of that very useful laxative, Cascara Sagrada. One of the most successful results of the endeavours made to overcome the taste is the Cascara Cordial. The dose of this is about the same as for the fluid extract, the strength and medicinal properties not having been impaired.

Messrs. Parke, Davis, & Co.'s Concentrated Glycerole Pepsin is forty-eight times the strength of the (U.S.) official Liquid Pepsin. It is very convenient for the preparation of the various wines, elixirs, &c., which contain pepsin, and is by itself an exceedingly active product.

The capsules containing Sulphate of Quinine (three grains) are marvels of pharmaceutical handiwork. The drug is contained in a soft, delicate film of gelatine, which undergoes almost immediate dissolution in contact with a moist surface. Being soft, they can be swallowed without an effort. We have never seen anything to surpass or even equal these capsules. The capsules containing Copaiba (ten minims) and those containing Sandal-wood Oil (ten minims) are also beautifully finished, and may challenge comparison. Empty capsules are provided to enable the dispenser to adopt this convenient method of exhibiting distasteful drugs. There is absolutely no excuse at present for obliging better-class patients to take nauseous remedies when such great facilities, due to the ingenuity of the manufacturing chemist, are available to obviate this objection.

We must not omit to mention the empty capsules destined to be filled with medicaments or food for introduction into the vagina or rectum. This is evidently a much simpler means of attaining this object than the troublesome and not altogether satisfactory method of employing cocoa butter as a vehicle, the preparation of which is troublesome and the bulk more or less undesirable.

Their compound Podophyllin Pill contains podophyllin, $\frac{1}{8}$ gr.; juglandin, $\frac{1}{16}$ gr.; leptandin, $\frac{1}{16}$ gr.; and cimicifugin, $\frac{1}{32}$ gr.

HYOSCYAMIN AND ATROPIN.

WHEN atropin was first discovered some sixty years ago by Messrs. Gerger & Hesse, it was supposed to be the active principle of the belladonna plant, and this idea still prevails. According to Messrs. Zimmermann, who are the agents for the Aktien Chemical Factory, it has been found, by the chemists who conduct the process of extracting the alkaloid, that, according to the method of treatment, belladonna root might be made to yield more or less hyoscyamin or the so-called 'heavy' atropin. The tests for the two bodies were carefully gone over, and it was then ascertained that it was quite possible to convert hyoscyamin into heavy atropin by heating and treatment with an alkali. On the other hand, pure crystallised hyoscyamin was obtained from atropin. It may therefore be considered as proved that atropin as such does not exist in belladonna root, and that, according to the treatment, either hyoscyamin, or heavy atropin, or a mixture of both may be obtained. Further, that the so-called heavy atropin is nothing more than an intermediate prosduct of the real active principle contained in belladonna root—namely, hyoscyamin. The same results were obtained when the seeds of henbane were operated upon.

SOZOIODOL.

Mr. Frederick Boehm (27 Billiter Square Buildings) has submitted to us samples of Sozoiodol, of which he is the sole agent for Trommsdorf of Erfurt. It is a compound of iodine (54 per cent.), carbolic acid (20 per cent.), and sulphur (7 per cent.). It is used in combination with sodium, potassium, mercury, zinc, &c. It is intended to replace iodoform as an antiseptic for dressings, &c., over which it possesses the advantage of being perfectly odourless and non-toxic. It is soluble in water or glycerine at ordinary temperatures. All the salts of sozoiodol are powerfully antiseptic, and seem likely to take rank as a standard application for ulcers, skin diseases, &c.

'SANITAS' ANTISEPTIC LOZENGES.

We have received a sample of the 'Sanitas' antiseptic lozenges, manufactured by the Sanitas Company, and containing 5 per cent. of the product. The value, in a certain class of disorders, of administering antiseptics by the mouth has been recognised, and 'Sanitas' has the merit of possessing a pleasant odour and being practically non-toxic. These lozenges are especially destined for the treatment of typhoid fever, cholera, dysentery, sore throat, diphtheria, &c.

BURROUGHS, WELLCOME, & CO.'S TABLOIDS.

Messrs. Burroughs, Wellcome, & Co. have forwarded us samples of their tabloids of the various drugs of recent introduction—Salol, Sulphonal-Riedel, Antipyrin, &c. The convenience of administering drugs in tabloid form is very great, errors of dosage being impossible. The dose, moreover, is easily taken without imparting any disagreeable taste. The Zymine Peptonising Powders (Fairchild) have now a world-wide reputation, and their usefulness is well established.

TABLOID TRITURATES.

The new pocket case of tabloid triturates, just designed and manufactured by Messrs. Burroughs, Wellcome, & Co., is a 'thing of beauty' as well as a compact emporium of triturated drugs in tabloid form. We have already had occasion to speak highly of triturates as a means of exhibiting drugs, and the convenience of administration is enhanced by their being made into tabloids and arranged for easy transport in the pocket.

NEW SOAPS.

Messrs. Burroughs, Wellcome, & Co. call our attention to their Eucalyptine Lanoline Soap, both as an antiseptic and an emollient. The value of lanoline is now so well known and appreciated that it is quite unnecessary to say more than that as a base for soap it is a useful addition to the toilette-table, the hospital, and the surgery. When eucalyptia is incorporated with it, it becomes a far more valuable agent. Some time since the firm made arrangements for a supply of E. globulus, from which they have extracted a specially refined disinfectant. It is this preparation which is incorporated with lanoline soap. It is about four times as powerful as carbolic acid, and is non-irritant and non-poisonous. It has already found considerable favour with the profession.

COLEGATE & CO.'S CASHMERE BOUQUET TOILET SOAP.

This is a high-class toilet soap of a pale straw colour, highly fragrant, manufactured by Messrs. Colegate, extensive manufacturing perfumers of New York, for whom Messrs. Burroughs, Wellcome, & Co. are the English agents. The firm make no less than 103 different kinds of soap, but the Cashmere Bouquet Soap has obtained so much favour that, we are informed, the quantity sold last year exceeded that of all other fancy soaps imported into the United States.

LUNBORG'S GOYA LILY PERFUME.

We have received a sample of this perfume, manufactured by Messrs. Ladd & Coffin, the noted perfumers of New York, through Burroughs, Wellcome, & Co., their English agents. The Goya Lily is a bulbous plant, at present very little known in Europe. It grows in Central Africa on arid soil, and the natives say only blossoms once in ten years. We may, therefore, reasonably suppose that the soap can be at present only made in small quantities. Each bulb only produces one bloom, but this is of very large size, measuring from 12 to 16 inches in diameter. Its fragrance is stated to be of exquisite sweetness, and, judging from the delightful perfume emitted by the extract and its lasting power, this statement is probably correct.

APPLE'S SOAP.

Messrs. Freeman & Hildyard, Dover Road, Borough, send us samples of this soap for the toilet. It is a very well-prepared article, and lower in price than any of the high-class toilette soaps. It is pleasant to the skin, and appears to be economical in use. The perfume with which it is scented is not too powerful, and it is stated by the makers that the essences used for this purpose are extracted from fruits as well as flowers. It is a very useful addition to the toilet.

Dr. Ireland is about to publish a new gallery of insane or eccentric personages. Amongst others, Swedenborg, Louis of Bavaria, Riel, Guiteau, Theodore of Abyssinia, Thebaw, late of Burmah, Malagrida, and others. Treated from Dr. Ireland's point of view, the volume will doubtless contain much that is interesting and valuable.

A Remedy for Sleeplessness.—In the *Lancet*, July 1888, p. 174, a new remedy for sleeplessness is propounded. This latest proposition is founded on the theory that the two cerebral hemispheres have different functions, the left being employed in intelligent thinking, the right in 'unconscious cerebration,' including the composition of dreams. Proceeding on this assumption, the author of this new method merely sets himself thinking over the details of a dream, the more recent the better, and he finds that in the process his drowsy right intellect overshadows his waking left, and sleep is the result. The writer does not consider that there is enough proof of such a division of the cerebral functions, and would rather argue thus:—The very effort to revive a dream implies a concentration of the mental function within the dreamer's mind, and a withdrawal from all outward and inward realities. This withdrawal is the one great essential to sleep.

EXAMINATION OF CANDIDATES FOR HER MAJESTY'S INDIAN MEDICAL SERVICE.

MEDICINE.

SIR WILLIAM AITKEN.

TUESDAY, AUGUST 21, 1888.—FROM 10 A.M. TO 1 P.M.

1. A ship's captain, aged 45, was admitted to hospital on August 23, 1887, suffering from dyspnœa and dysphonia of about eight months' duration. He had always been an exceptionally healthy man, never having had any severe illness before; also, he had always been temperate, and never had any form of venereal disease.

In January 1887 he was shipwrecked off the coast of Ireland, and caught at that time a severe cold, which continued till two months ago; but during this time he had neither difficulty of breathing nor pains in the chest. About two months ago the dyspnœa and dysphonia complained of commenced. These symptoms set in suddenly (within twenty-four hours), and have been steadily getting worse. The power of phonation has never completely disappeared, but the degree of dysphonia varies very considerably at different times. The dyspnœa is very markedly exaggerated on any exertion; but when he is absolutely at rest, both the dyspnœa and the dysphonia are much alleviated. No pain is complained of in any part, but a peculiar sense of constriction in the throat is experienced on exertion. When lying at rest he feels the mucus collecting in his throat, and the attempts to expectorate excite the cough. There is no pain or difficulty in swallowing. The chest is well formed, and there are no bulgings or pulsations. The breathing is equal on both sides, and there is no absolute dulness, the only suspicion of impaired resonance being found at the top of the sternum towards the left side. There is no episternal pulsation. The cardiac dulness is perhaps slightly increased, and the sounds, though slightly irregular, are normal. The pulses are equal at the wrists, and the vessels generally are not atheromatous. The pupils are equal.

On examination of the larynx no obstruction of the glottis is seen. The arytenoids are pale-pink in colour, and of normal size; that of the left side is somewhat enlarged. The left vocal cord is midway between the position of adduction and abduction, and on attempted phonation is quite fixed and immovable. The right cord moves normally.

Three days after admission pain and uneasiness in swallowing are complained of for the first time.

August 29.—A careful physical examination was made with the following result:—An area of slightly impaired percussion was detected on the left side posteriorly close to the spine, and at the level of the fourth, fifth, and sixth dorsal vertebræ. The respiratory murmur was fainter over the upper lobe of the left lung than on the right side. The dulness in front, over, and to the left of the *manubrium sterni* was quite distinct. On auscultating over the œsophagus no delay in deglutition could be made out. The urine was found to be normal.

September 7.—Up till last night patient has remained in much the same condition as on admission; but about 2 A.M. he began to complain of an increased sense of stuffing in the chest, with inability to get up the mucus. This feeling was relieved by the use of the inhaler, and up to 4 P.M. he expectorated fully a pint of muco-purulent material. At this hour the sense of suffocation again supervened, and he has scarcely expectorated anything since. All the time the breathing has been exceedingly laboured and difficult, and at 9.45 A.M. dyspnœa of a very severe type had set in—all the accessory muscles of respiration being vigorously called into play. The respirations numbered twenty-four in the minute, inspiration being pretty free and unaccompanied by much noise; but the expiration is prolonged, laboured, and noisy. Voice is almost completely gone; the lips are slightly livid; and the face is pale and bedewed with an abundant clammy sweat. The respiratory murmur over the whole left front is very feeble and distinct; over the right front it is loud, harsh, and full. The pulse numbers 120, and is weak and intermitting.

Sept. 10.—After the last report on the 7th instant the patient lapsed into his usual state of chronic dyspnœa, but manifestly worse than before, and with greatly reduced strength. Expiration is still the most laboured part of the respiratory cycle; there is great difficulty in expectoration, and the pulse is very feeble and intermitting. Very distinct difficulty in swallowing was again experienced yesterday. The respiratory murmur is almost entirely abolished over the whole of the left lung in front, where also there is great deficiency of resonance on percussion, and the dulness over the *manubrium sterni* is well marked.

Sept. 11.—The patient died this morning during an attack of extreme dyspnœa.

Discuss the pathology of this case. Explain the indirect or pressure symptoms on anatomical and physiological grounds, and the diagnosis to which they point.

2. Describe the condition of the urine usually found in a case of (*a*) acute nephritis; (*b*) chronic nephritis in a gouty patient. What are the chief complications to be feared in each of these cases; and, finally describe the appropriate treatment and general management of the cases and complications.

3. What are the symptoms of venous congestion of the liver? Under what circumstances is it brought about, and what are the changes in the liver as the venous congestion becomes more and more extreme?

4. Enumerate the causes of *post partum* hemorrhage. Give the differential diagnosis of its different forms, and describe the treatment.

5. Discuss the causation of the dyspnœa of asthma and bronchitis, and mention the drugs, their doses, and mode of administration, which most of all tend to the relief of such dyspnœa.

SURGERY.

MR. POLLOCK

MONDAY, AUGUST 20, 1888—FROM 2 P.M. TO 5 P.M.

1. Describe the condition known as syphilitic keratitis (hereditary), the peculiarities usually observed in a patient so affected, and the treatment to be persued in such a case.

2. Describe the conditions observed in acute inflammation of the knee-joint, the changes which take place in the course of the attack, and the treatment in its various stages.

3. A young man was violently pushed down, and fell on his back on the pavement. He did not experience any pain after the accident, and was able to walk home with perfect ease. A few months subsequent, he began to feel weakness in his legs, and this gradually increased until he was barely able to raise himself from the sitting posture, and, when upright, had difficulty in standing or walking. There was slight dull pain in the lumbar region, and increased discomfort on stooping forward, but no restriction in the movements of the vertebræ. There was not any loss of sensation.

What was the most probable cause of this paralysed condition, and what treatment should be adopted under such circumstances?

It may be concluded that the patient recovered under treatment.

4. Describe the symptoms of fracture of the neck of the femur (1) when within the capsule, (2) when external to the capsule, and the treatment in each condition.

5. By what symptoms would a surgeon be able to diagnose rupture of the bladder, within the abdomen into the cavity of the peritoneum? Describe the treatment to be adopted in such an injury.

6. What are the pathological conditions which give rise to senile gangrene, (2) traumatic gangrene; and what treatment shou be adopted in each condition?

ANATOMY AND PHYSIOLOGY.

SIR JOSEPH FAYRER.

MONDAY, AUGUST 20, 1888—FROM 10 A.M. TO 1 P.M.

1. Describe the frontal bone, giving an account of its connection with other bones, the parts of importance which are in relation to or connected with it, its structure and development.

2. Describe the origin, course, anatomical relations, and distribution of the internal iliac artery, and of its principal branches.

3. Describe the structure, anatomical relations, and functions of the retina.

4. Describe the origin and distribution of the fifth nerve within the cranium; trace the distribution of the inferior maxillary division, and give an account of its functions.

5. Describe the parts and the order in which they are met with in a dissection of the popliteal space.

CHEMISTRY.

DR. ALLMAN.

TUESDAY, AUGUST 21, 1888—FROM 2 P.M. TO 4 P.M.

1. When a mixture (in any proportion) of oxygen and hydrogen is exploded a certain volume of the mixed gases disappears. What were the relative volumes of oxygen and hydrogen in the portion which had thus disappeared?

2. Write down in the form of an equation the reaction which takes place on passing steam over pieces of iron heated to redness in a tube.

3. When a piece of filter-paper, on which warm oil of turpentine has been poured, is plunged into chloride it bursts into flame, with the formation of a dense cloud of black smoke. Explain this phenomenon.

NATURAL SCIENCE.

DR. ALLMAN.

TUESDAY, AUGUST 21, 1888—FROM 4 P.M. to 6 P.M.

ZOOLOGY.

1. What are the more important characters by which amphioxus differs from a typical vertebrate?

2. Refer the Barnacle (Lepas) to its proper class in the animal kingdom, and state your reason for so referring it.

3. Refer to its proper sub-kingdom and class an animal with the following characters:—

Body protoplasmic, without differentiated organs or cellular tissues, without an enveloping membrane, and having the power of emitting extensile and retractile prolongations of its protoplasm.

BOTANY.

4. Distinguish among the following genera those in which the ovary is coherent with the calyx ('ovary inferior') from those in which the ovary is free ('ovary superior'):—

Ribes, Malva, Digitalis, Cucumis, Papaver, Conium.

5. Mention one or more instances of the occurrence of vibratile cilia in the vegetable kingdom.

6. Refer to its natural order a plant with the following characters, and cite one or more examples:—

Corolla monopetalous, 5-lobed, regular. Stamens inserted on its tube and alternate with its lobes. Ovary free, 1-celled, with two parietal placenta. Seeds with fleshy albumen. Leaves opposite.

PHYSICS.

7. At what temperature does water attain its maximum density.

8. What is the equatorial current of the ocean? Mention its direction. To what cause may it be attributed?

9. A solid body weighs in vacuo 100 grammes, while in water at 40° centigrade it weighs 80 grammes. What is its specific gravity?

The London
Medical Recorder.

Article 921.

SIR HENRY THOMPSON AND MR. HURRY FENWICK ON THE USE OF THE ENDOSCOPE WITH ELECTRIC ILLUMINATION OF THE BLADDER.

One of the most encouraging promises of advancement in surgery lately has been that of electric illumination of the urinary bladder, and with this the improvement in the construction and use of the endoscope. The old instrument was much talked of and used more than twenty years ago, and much was expected of it when Desormeaux, of Paris, introduced it, and Dr. Cruise, of Dublin, made it more practicable by improving the means of illumination. But it has remained rather a surgical toy and of very little practical use until Dr. Nitze has had it so much improved, and has given such careful attention to its use, that it seems as if it may become a valuable instrument in the hands of special observers, if not of the scientific and practical surgeon.

There has been a good deal of correspondence upon the share taken by Dr. Nitze and Mr. Leiter respectively in the production of the instrument as it is now improved, Dr. Nitze maintaining that Leiter, who is a skilful instrument-maker of Vienna, has merely carried out his suggestion, and that the credit is rather his own (Dr. Nitze's) than anyone else's, and he is angry with anyone who does not acknowledge this.

As it is now used we have a minute Swan electric lamp lying in the apex of a hollow sound, and throwing its powerful light through the water contained in the bladder and enabling the surgeon to see the small picture reflected upon a mirror placed at the bend of the catheter, or to examine the wall of the bladder at the end of a straight tube. Certain rules must be attended to, which are formulated by Sir Henry Thompson (*Brit. Med. Jour.*, April 14. 1888). First, it is necessary that the bladder should contain fluid ; the light cannot be employed in an empty bladder, as a considerable degree of heat is produced ; a quantity of fluid not less than six ounces is desirable. Secondly, the fluid must be transparent ; it is well to wash out cloudy urine, and more especially if any source of hæmorrhage exists, to wash out the bladder so gently as to avoid any fresh flow of blood, or the existence of any abnormality of the mucous surface cannot be detected. Thirdly, the sound must now be carefully passed into the bladder before the circuit is completed and the light produced, and this must be extinguished before removal of the instrument. Fourthly, when the beak of the sound is felt free within the partially distended bladder, it should be pressed in nearly as far as it will go, and the wires attached connecting it with the current ; by a movement of the little handle of the instrument the light is instantly produced.

A small prism placed at the angle between the shaft and the beak of the sound transmits the image of the bladder surface at the end of the instrument to the observer's eye looking through a small telescope in the straight external end of the sound. Different portions of the bladder wall are thus examined, but it is necessary to use a more angular sound for parts immediately behind the prostate. While the light is turned on, it is necessary to avoid contact with any one spot for more than a few seconds, and when the sound is removed from the bladder the beak must be placed under water if it be relighted or the little Swan lamp will be injured.

We feel strongly that an improvement is wanted in some arrangement by which the bladder can be injected and washed out while the instrument remains *in situ*, and this is of great practical importance where any tendency to hæmorrhage exists, and it is in these cases especially that a cystoscopic examination is likely to be wanted.

Sir Henry Thompson recognises the value of the instrument in searching for the causes of hæmorrhage, and especially when it arises from papillomata, which may develop slowly for two, three, or four years before the loss of blood becomes considerable, and here he allows that sometimes we may now be able to ascertain the facts by a cystoscopic examination without the necessity of exploring by the finger through a perineal or suprapubic opening. For cancerous growths he does not think the endoscope of much value, but for foreign bodies it may sometimes be of service, and possibly in some cases of impacted calculus. In affections of the urethra he does not think it will be found useful, and he urges that the older methods of examination should not be displaced by this newer introduction.

Mr. Hurry Fenwick has taken up the subject with ardour and has published a small book upon it (*The Electric Illumination of the Bladder*, J. and A. Churchill, 1888) besides separate papers in the journals. One of the most practical and important is a short one in the *British Medical Journal* of April 14, 1888 ('The Value of Electric Illumination of the Urinary Bladder in the Diagnosis of Obscure Vesical Disease').* He gives here the account of a number of illustrative cases from foreign literature and some from his own experience. Useful diagrams are given of the appearances seen in certain cases, and these are what are wanted for the purpose of teaching the use of the instrument. Four are of vesical growths, but we have yet a good deal to learn of the meaning of the appearances seen by means of the cystoscope. Probably the use of the instrument will remain much in the hands of those who devote themselves more exclusively to it, and the small opportunities which the hospital surgeon or general practitioner will have of familiarising himself with its use and with the appearances discovered by it will not warrant its becoming an instrument of general application, or one that will replace the other means we have of diagnosis. Years ago we used the endoscope of that time very thoroughly, and though the present modification possesses many very practical advantages we cannot but feel that the cases in which it will prove useful are very limited, and the special training will be difficult.

There is, however, a new field open for further observation and research, and there is no doubt it will be usefully extended to other mucous cavities, and particularly to the stomach, which can easily be reached by a straight as well as by a bent or flexible tube.

* *See* London Medical Recorder for June 2?, 1888, Art. 648.

The difficulty of determining from which ureter blood or pus is coming has long been recognised, and is referred to without much hope of solution by Mr. Henry Morris (*Surgical Diseases of the Kidney*), and recently Mr. Reginald Harrison has conceived the practicability of catheterising the ureter by guiding the instrument into the vesical orifice (*Lancet*, Oct. 4, 1887; March 10, 1888); but the electric illumination of the bladder has enabled the surgeon to examine the orifice and see with the endoscope the discharge of blood from it. This is undoubtedly of great practical importance, and the paper upon the subject (*British Medical Journal*, June 16) by Mr. Hurry Fenwick is worthy of careful notice. The diagrams given in it are certainly very clear, and the means of distinguishing whether hæmorrhage comes from the right or the left kidney would appear in skilful and experienced hands to be now a practical possibility. This is certainly a great gain in modern methods of diagnosis which we cannot fail to recognise. There must, however, still remain difficulties in its use, and these may or may not be surmounted. Experience will give facility of manipulation and readiness of interpreting appearances; but a narrow urethra, a projecting prostate, and an opaque medium through which inspection has to be made will remain difficulties which will diminish its usefulness. Still, there is no doubt that we have here a valuable instrument which will lead to important results in the hands of experienced surgeons and careful observers in anatomy, physiology, and pathology.

W. W. Wagstaffe.

Article 922.

RANDOLPH ON A CONTRIBUTION TO THE PATHOGENESIS OF SYMPATHETIC OPHTHALMITIS.*

It seems as if the pathology of sympathetic ophthalmitis were destined to prove a bone of continual contention, for no sooner does any theory, professing to be based on clinical, pathological, and experimental facts, obtain after a long struggle something like general acceptance, than an opponent arises who proves, at any rate to his own satisfaction, that the alleged facts are fictions, and the theory built on them unsound.

This paper commences with an able review of most of the theories which have at different times obtained acceptance; this contains much that is of interest, which we pass over till we come to Deutschmann's experiments. There can be no question that the results of these and the theory founded on them have obtained a very general acceptance, which has been the more readily accorded, as the theory that sympathetic ophthalmitis is a septic inflammation is consistent with the ideas of pathology at present in vogue.

To make the scope of this paper plain it is necessary to give a rather fuller epitome of Deutschmann's experiments than is given by Dr. Randolph. He injected pus-cocci into the vitreous of rabbits; the eye operated on became violently inflamed, and, after an interval, neuro-retinitis appeared in the other eye; the rabbits died, usually a few days after this, and organisms were found in the papilla of the second eye and along the whole course of both optic nerves and in the chiasma. The inference drawn was that the organisms had travelled to the second eye along this route, and that this was the manner in which sympathetic inflammation was produced. The fact that the anterior part of the uveal tract, which in the human subject bears the chief brunt of the attack, was unaffected, was explained by the animal dying too soon. To see if this were so, the route was shortened by injecting the cocci into the optic nerve itself, and applying a ligature of the proximal side to prevent systemic infection, with the result that suppurative iritis was produced. Eyes were then examined which had been enucleated, because sympathetic mischief had either commenced or threatened. From these eyes micrococci were reared, which, inoculated into a rabbit's eye, produced the same effect as those used in the first described experiments. In a few experiments rabbits' eyes were inoculated with material obtained from the *sympathising* eye in man with the same result. The results of these experiments were so definite that it is not surprising that the theory of the septic nature of sympathetic ophthalmitis has met with wide acceptance. So far, however, we are not aware of any experiments which have fully confirmed Deutschmann's results, although many have found micro-organisms in old injured eyes, and have reared pus-cocci from them. Gifford made a large number of experiments, which we commented on at the time (London Medical Record, January 1887). He used the same material as Deutschmann, but obtained rather different results. He succeeded in setting up severe inflammation of the inoculated eye, and the inflammation could be traced to the apex of the orbit, not along the optic nerve-sheath, but along the arteria centralis and arteria ophthalmica. But the micrococci never extended beyond the lamina cribrosa, and the inflammation never extended to the other orbit. When the spores of anthrax were used they were found in both optic nerves, and Gifford believed they had travelled to the apex of the orbit along the vessels, had reached the pia-mater over the chiasma, and then passed down the sheaths of both nerves. Both in Deutschmann's and Gifford's experiments a large number of the animals died from systemic infection.

Randolph's experiments seem to have been completely negative. He inoculated the vitreous in a large number of dogs and rabbits, with a suspension of the staphylococcus aureus; they were killed at various dates after the operation. Five of the experiments are given in detail and are said to be fair samples of the remainder. In all, the other eye was examined daily with the ophthalmoscope. In two there was slight engorgement of the retinal vessels twenty-four hours after the injection, which subsided in three or four days. In one keratitis occurred in the other eye, but this seems to have been merely a coincidence. In most cases the eye operated on was lost from irido-cyclitis, but in no instance was the other eye affected except to the extent just mentioned. No micro-organisms were found in any case even in the inoculated eye. At first he 'was convinced that he had a neuritis extending from the infected eye to its fellow by way of the chiasma. Skilled microscopists agreed with him, but suggested that he should kill a dog, and study the normal condition.' The result was that he found that the supposed increase of nuclei was really the normal condition, and that the nuclei were much more numerous at the distal than at the proximal ends of the optic nerves. The writer adds that he 'does not

* *Archives of Ophthalmology*, June 1888. (American Edition.)

mean to be understood as asserting that Professor Deutschmann has really mistaken the normal condition of the nerve for a neuritis.' If this is so we can only say that we have quite mistaken his meaning, and think it likely others will do the same.

The author's culture experiments also, with the contents of old injured eyes, were entirely negative. One case, which was under Hirschberg, is especially important, because sympathetic inflammation had actually occurred, the eye having been enucleated two weeks after its outbreak. The culture experiments were made by Nordenson in Koch's laboratory, but the results were completely negative. Speaking of the experiments of Deutschmann on this point Randolph says that 'it is quite possible that he inoculated an impurity, at any rate he cannot be certain that the growth on the gelatine had its origin in the eye.' As we have already mentioned, these experiments of Deutschmann have been confirmed by others. How far the precautions taken to exclude accidental contamination were efficient is one on which only an expert in such experiments can pronounce an opinion.

As regards the experiments on rabbits we cannot but think that Dr. Randolph proves too much. Deutschmann advances the theory that sympathetic inflammation is caused by micro-organisms travelling from one eye to the other, and Dr. Randolph opposes to this the negative result of his own experiments in which there were no such organisms. Whether their absence was due to the smallness of the quantity injected, which is admitted to be less than in Deutschmann's experiments, or to some other cause, is beside the question, but the fact is sufficient to destroy the parallelism of the two sets of experiments.

It seems to us that Dr. Randolph makes a much more potent, although an old objection to Deutschmann's conclusions when he points out that nearly all the animals experimented on by him died. There is not a particle of evidence that sympathetic inflammation in the human subject is ever anything but a purely local affection.

To Gifford's experiments with anthrax no importance is attached. According to our author, 'he could not have selected an organism which would have given him less valuable results.' Gifford inoculated one eye, and found spores in the other; Randolph inoculated the tail and found them in both eyes, and plainly intimates that Gifford might have found spores in the tail, or, in fact, wherever he chose to look for them.

This is entirely a negative contribution. The writer advances no theory of his own, though he seems to lean towards the reflex influence of the ciliary nerves. We certainly cannot agree with him that 'the fact that changes in the structure of the ciliary nerves are rarely seen is one of the strong points in favour of this theory.' It may not be, and probably is not, evidence against it; but it cannot be in its favour.

Dr. Randolph's faith seems weak on points which we should have thought were firmly established. He says that wounds of the ciliary region are 'thought' to be peculiarly liable to predispose to sympathetic ophthalmitis. To ascertain the truth of this he made experiments on dogs, with antiseptic precautions, without result. As he subsequently raised a doubt whether dogs are susceptible of sympathetic inflammation, we fail to see what he expected to prove, and in any case clinical evidence which would be of much greater value could be obtained in abundance. Moreover, injuries inflicted with antiseptic precautions are not comparable with accidental wounds, and could therefore prove nothing as to the special danger of these when inflicted in the ciliary region.

It is evident that this question cannot remain where this paper leaves it. The truth of some of Deutschmann's and Gifford's experiments can be put to the test, and a commission of bacteriologists of acknowledged ability might with great advantage investigate the matter. It is a field of study which legislation has practically closed to workers in this country, but it is to be hoped that we shall before long have some authoritative statement from elsewhere on the subject. W. Adams Frost.

Article 923.

KÏANOVSKY ON INJURIOUS EFFECTS OF TIGHT-LACING.*

In the *Vratch*, Nos. 20 and 21, 1888, pp. 385 and 407, Dr. Boris I. Kïanovsky, of St. Petersburg, publishes a very able paper on tight-lacing, or, to use Professor W. H. Flower's definition, 'the system of squeezing together, rendering immobile and actually deforming the most important part of the human frame' (*Fashion in Deformity*, 1881, p. 79). Reviewing the work on the subject, done by his predecessors, Dr. Kïanovsky points to very interesting observations made by Professor P. F. Lesshaft, of St. Petersburg (*Vratch*, No. 18, 1884, p. 310), in reference to the ill-effects arising from habitually wearing stays, on the development of bones and muscles in school girls. 'Young girls,' he says, 'yet unable to properly control their muscles, lose any possibility of duly exercising them as long as the body remains encased between the stiff splints of a corset. Moreover, as a rule, stays are adjusted to the parts unequally, since the splints are usually of an unequal length, whether this be dependent upon a maker's neglectful work, or upon their bending from wear and tear; hence, conditions arise which favour an unequal or asymmetrical development of the subjacent muscles. Again, while compressing the chest, stays constrict the ribs, interfere with breathing, and, consequently, lower the systemic metabolism, and, by that, the vital action of all muscles of the body. This failure of strength and elasticity about the muscles forming the abdominal pressure gives rise to an undue prominence of the belly, to its bulging forwards, while the abdominal viscera, being defectively supported by a flabby abdominal wall, become exposed to exaggerated commotions on movement, which circumstance, in its turn, creates certain conditions favourable to the development of a morbid irritability about the visceral nervous system.' According to Professor Lesshaft, spinal curvatures are met in schools for girls by far more often than in those for boys, and in older girls more frequently than in younger ones; facts which he attributes mainly to their habitual tight-lacing, since the latter interferes with the action and development of the muscles supporting the vertebral column of the girl.

But not only do the osseous and muscular systems suffer from tight-lacing. The latter tells its tale in regard to almost all systems and organs of the female body. Thus, Hyrtl, Escherich, Hasse, and

* Kïanovsky, Dr. Boris I.—On Injurious Effects of Female Stays. (*Vratch*, Nos. 20 and 21, 1888, pp. 385 and 407.)

others point out that stays (as well as a constricting bodice) may arrest the development of, and utterly disfigure, the breast and nipple, the woman becoming unable to suckle her infant. According to Dr. Kïanovsky, 'masses of women (in institutions for young girls, amongst certain Caucasian peoples, &c.) feel ashamed to have full or large mammæ, and strive as much as possible to acquire flat, "youthful" breasts; hence, during the period of development of breasts, the women not only lace themselves tightly in stays and bodices, but, in addition, sleep on their breasts, with some hard object (book, &c.) below.' Professor Bouchut draws attention to the fact that pressure of stays on the intercostal spaces in tight-lacers suffering from intercostal neuralgia, may give rise to paroxysms resembling angina pectoris. Meyer states that tight-lacing decidedly manifests an injurious influence on the eye, in consequence of congestion resulting from obstructed reflux of blood from the head along the jugular veins. Almost every handbook of pathological anatomy describes a peculiar, more or less deep, groove on the surface of the liver, which is very often found on the *post mortem* examination of female bodies, and which is caused by tight-lacing. According to Professor N. P. Ivanovsky, of St. Petersburg (*Handbook of Special Pathological Anatomy*, p. 204), 'the hepatic capsule adjacent to the grooves proves to be considerably thickened from chronic inflammation, while the hepatic tissue itself at such spots is dense, atrophied to a more or less considerable depth, and sometimes even void of any glandular elements.' Professor Billroth and Dr. Hacker published a remarkable case of the so-called 'Schnuerleber (tight-lacer's liver),' where tight-lacing had caused an almost complete amputation of a portion of the organ, and they had had to fix the piece with sutures. Professor V. A. Manassein has for many years drawn the attention of his students to an important *rôle* appertaining to stays (and tight petticoat bands) in the etiology of gall-stones. His observations are supported by Dr. Rotter (*Deutsche med. Wochensch.*, Feb. 14, 1884), according to whose researches on gall-stones, of 1,034 necropsies at Munich the stones were present in men in 3·9 per cent. of the whole number, and in women in 9·9 per cent.; in as many as 40 per cent. of the female cases, simultaneously with gall-stones there were found grooves and constrictions caused by stays. An important work recently published by Professor Marchand (*Deutsche med. Wochensch.*, March 22, 1888) throws a strong light on the mechanism of the formation of gall-stones in tight-lacers. Dr. W. J. Collins's extremely instructive experimental researches (the *Lancet*, March 17, 1888, p. 518), similarly elucidate pretty well why 'deficient bile, dyspepsia, sickness, constipation, clayey stools, headaches, chlorosis, debility, form a natural sequence' of tight-lacing. That stays may give rise to wandering liver, Dr. Arini's case proves beyond any doubt. That tight-lacing may send the kidneys wandering, Professor Manassein has shown on the ground of fairly extensive statistical data which unmistakably prove that movable kidney occurs in tight-lacers by far more frequently than in women who do not wear stays, the proportion remaining identical both for the childless and child-bearing. Professor Graily Hewitt and Drs. Meyers and Helene Betts state that tight-lacing brings about the downward-displacement of the womb, and represents an important etiological factor in the development of uterine flexions. Dr. Betts adds that tight stays, through their giving rise to abdominal and uterine venous hyperæmia, are apt to produce many other uterine affections, amongst which she places even fibromyomata. Several years before her, Dr. Neftel had carried out numerous experiments on rabbits and dogs, which teach that a prolonged (even a moderate or mild) compression of the chest and abdomen induce an arterial anæmia and venous stasis, with dilatation of veins and the right cardiac cavities, the most intense congestion being found in the liver and other abdominal as well as pelvic parenchymatous organs. Scheiber, experimenting on healthy young men, arrived at the conclusion that even a short lasting compression of the chest was apt to cause albuminuria of from one to thirteen hours' duration, sometimes associated with the appearance of hyaline casts, and red and white blood-corpuscles in the urine, the amount of albumen varying from mere traces to 2 per cent.

Such, briefly given, is the summary of former contributions to the biology of tight-lacing. Dr. Kïanovsky now supplements the list with his own careful experimental researches which he has carried out on thirty women in Professor Manassein's clinic, with the object of determining the influence of stays on the vital capacity of the lungs, respiratory excursions of the chest, strength of inspiration and expiration, blood-pressure, pulse, and breathing. Of thirty persons experimented upon fourteen were married women and sixteen girls, the age varying from 18 to 44 (in twenty from 18 to 29). All but two were habitual tight-lacers, of from five to twenty-seven years' standing. Of the twenty-eight, in eight movable kidney was present, in six pulmonary apical process, in five anæmia or chlorosis, in fourteen habitual constipation or intestinal catarrh, and in five hysteria.

A. *The vital capacity of the lungs* was determined by means of Hutchinson's spirometer. When measured in the women with stays off, it varied from 2100 to 3700, the average being 3100; with stays on, between 1700 and 3200, the average being 2665. The decrease in individual cases oscillated between 50 and 800, the average minus amounting to about 357.

B. *Strength or energy of inspiration and expiration* was examined by Waldenburg's pneumatometer. As to expiration, in five women of twenty-six its strength remained identical on measuring with stays on and off. In the remaining twenty-one examined, it decreased from stays at the rate of from 4 to 32, the average diminution being 12. The strength of inspirations decreased under the influence of corsets in every one of the twenty-six examined, the minimum varying from 4 to 22, the average being about 10½.

C. *Respiratory excursions of the chest.*—To avoid any errors involved by varying amount of glandular and subcutaneous cellular tissues in individual cases examined after usual methods (across the breasts), Dr. Kïanovsky measured the thoracic circumference at the level of the axillary fossæ, with the woman's arms freely hanging down, the measurements being taken, on each comparative observation, three times—on quiet, maximum and minimum respiratory movements or breathing. Only in one of thirty the thoracic excursions remained unaffected by the presence of stays. In the remaining twenty-nine they markedly decreased, the diminution varying from ½ to 3 centimètres (in eleven women it amounted to 1½ centimètre, in six to 1, in five to 2,

in five to ½, in one to 2½, and in one to 3 centimètres).

It is obvious, therefore, that stays most decidedly diminish (*a*) the pulmonary vital capacity; (*b*) energy of inspiration and expiration, especially that of the former; and (*c*) the respiratory excursion of the chest. From these facts it is not difficult to conclude that—as the author puts—'the corset dooms the tight-lacer to oxygen-starvation, her chest being constricted and the amount of oxygen inspired necessarily diminished.' This 'oxygen starvation' explains sufficiently the well-known fact that habitual tight-lacers habitually suffer from dyspnœa and cardiac palpitation on any somewhat brisk locomotion, are easily fatigued from any muscular or mental exercise, have but a poor appetite, easily faint on any slightly strenuous efforts, &c. To elucidate this point still further, Dr. Kïanovsky carried out some comparative experiments concerning the influence of stays on—

D. *Pulse and breathing* in several women, whom he made to briskly run a certain distance (about 1,000 feet) with and without stays. It proved that while the frequency of pulse after a run without a corset rose only to 136, 140, 156 per min., with stays on, it amounted (in the same persons) to 144, 160, 176. Similarly, the frequency of breathing with stays off rose only to 32, 36, 44, 58, and with stays on to 40, 48, 60, and 64 per min. In conclusion, the author examined—

E. *The Blood-pressure* in 25 women, the measurements (by means of Basch's sphygmomanometer, applied to the radial artery) being taken in each case, first without stays and then ¼ or ½ hour, 3 and 5 hours after the corset had been put on. In rough outlines, this series of experiments showed that, as a rule, after a fleeting rise depending upon the lacing procedure itself, the blood-pressure slowly falls (*e.g.* from 180 to 160, from 150 to 145, &c., in 3 hours); a fact which is explained by arterial anæmia induced by tight-lacing.

It is worthy of special attention that in 6 of the 28 habitual tight-lacers experimented upon, a more or less extensive 'apical process'—that is, probably, initial phthisis—was present. In common with Neftel, Dr. Kïanovsky believes that Koch's tubercle-rods find a very suitable soil in the anæmic, sluggish, and flabby lungs of the chest-constrictor.

It is almost superfluous to add that Dr. Kïanovsky is as far as possible from ever expecting that any tight-lacer will be deterred from her suicidal practice either by his work, or by that of his predecessors. Undoubtedly, the woman—or rather the lady, the 'civilised' lady—will remain as ever a blind and inert slave of fashion, until some great social changes involving the educational system take place. Up to that time, all scientific researches, however able and rich in convincing results; all medical sermons, however well-meaning, ardent, and talented, will have no practical consequences whatever. So that, for a time to come, every new worker or writer on the subject will invariably find himself enabled by the state of the matter to commence or conclude his paper with Professor Flower's words and to feel most positively sure that they will find no echo in the barren chests and empty heads of tight-lacers. 'In admiring such distorted forms as the constricted waist, we are neglecting the criterion afforded by nature; we are departing from the highest standard of classical antiquity; we are simply putting ourselves on a level in point of taste with Australians, Botocudos, and Negroes; we are taking fashion, and nothing better, higher, or truer for our guide;' and that in spite of the fact that, in this particular case, fashion 'affects those organs by which the important functions of respiration, circulation, and digestion are carried on, as well as those essential to the proper development and healthy growth of future generations.'

V. Idelson, M.D.

Article 924.

BURGESS ON A CASE OF OSTEOMALACIA IN A YOUNG ADULT MALE.*

The extreme rarity of this disease in the male has induced the author to make this communication. The patient lived to the age of 21 years. At 15 he broke an arm, from which period his disease was said to date. The legs gave way first, ability to walk lessened gradually. He had not been able to get about for two years before death; he was bed-ridden for the last four months. There was no evidence of hereditary syphilis. A sister appeared to have had rather prominent frontal eminences, a brother small incisors with deficient enamel, but no distinct history of rickets. However, the author, who describes the patient's condition when he saw him, certified to his death as from 'late rickets.' The immediate precursor of death was a severe attack of convulsions. The author based his decision upon the fact that there was beading of the ribs, but he changed his view upon reading the records published by Stanski and Davies-Colley, in which, as in other cases, beading of the ribs occurred in undoubted cases of osteomalacia.

The long and intractable course of the disease, in spite of cod-liver oil and the remedies usually successful against rickets, is in favour of osteomalacia. But Clutton's case of late rickets died, and Drewitt's case did not improve under cod-liver oil. Hence, failure of remedies and a fatal termination do not exclude late rickets. Convulsions are frequently associated with rickets, but, on the other hand, instability of the nervous system marks a class of cases of osteomalacia, the neurotic class of Virchow. In this case there was, apparently, bony union of the fractures. This, however, does not exclude mollities ossium, for in that disease, though the fragments are often disunited or incompletely so, they may join in the usual way.

The principal fact against rickets was the late age at which the disease made its appearance. It did not begin until after the fifteenth year, and terminated fatally at the age of 21. As far as the author knows, there is not a single fatal case of rickets beginning so late as puberty recorded. In Drewitt's case the disease began before the tenth year, in Clutton's at the eleventh, and in Davies-Colley's about the tenth year. Mild cases of late rickets are not to be relied on, for still greater difficulties in diagnosis attend them. Osteomalacia under twenty is certainly a rare disease. Only ten cases were recorded in 1866, when Durham added fourteen cases of osteomalacia to Litzman's 131, and of this small number but three were males. It is just possible that some of the ten might come under the class 'late rickets.' Even admitting this, the probability is in favour of a fatal case, which does not

* On a Case of Osteomalacia in a Young Adult Male. By Dr. Burgess, M.B. (*Medical Chronicle*, October 1888.)

begin until puberty, being osteomalacia, and not late rickets.

The view held by Trousseau, Hutchinson, and others, that osteomalacia and rickets are different aspects of the same disease, has the merit of simplicity and comprehensiveness. Bland Sutton's observations on animals appear to support this theory, for he states that in monkeys, carnivora, and rodents, captivity and bad hygiene give rise to rickets in infancy and puberty, and a condition resembling osteomalacia in old animals, and he considers alterations in the character of the disease to be due to the altered conditions of the skeleton in infancy, puberty, and maturity. Again, the same causes, bad food, cold, damp, and want of light and air are said to produce osteomalacia and rickets. The etiology of mollities ossium is, however, too uncertain to base an argument on, and we hear nothing of such a striking incidence of rickets in the districts where osteomalacia is said to be prevalent, as we should expect were the two diseases identical. Infantile osteomalacia contradicts the supposition which atttributes the differences between the pathological changes characteristic of the two diseases to differences in the stage of development of the bones attacked. And of the occurrence of mollities ossium in infancy there appears to be no doubt. For Recklinghausen, who examined the bones of two of Rehn's cases microscopically, pronounced them to be clear examples of osteomalacia.

Dr. Burgess states that he has since learned from a notice in the *Wien. med. Wochensch.*, July 21, 1888, that Adolf Hermann (*Inaug. Diss.*, Jena, 1888) has published a case of infantile softening of the bones which, while bearing the closest resemblance both clinically and anatomically to Rehn's six cases of osteomalacia, at the same time presented the appearances characteristic of rickets.

Noble Smith.

Article 925.

SENGER, ISRAEL, AND OTHERS ON THE DEGENERATIVE EFFECTS OF ANTIMYCOTICS ON THE PARENCHYMATOUS ORGANS, WITH SPECIAL REFERENCE TO RENAL SURGERY.

A discussion arose at a meeting of the Berlin Medical Association on a paper by Dr. E. Senger on the above subject (*Deutsche med. Zeitung*, No. 43, 1888). Dr. Israel said the thanks of the profession were due to Dr. Senger for his experiments on animals. Iodoform, especially indispensable as it is, must be carefully used on account of the mischief it may cause. Högyer, Binz, and Höpfl had all proved that the introduction of iodoform into rabbits, dogs, and rats had produced parenchymatous changes in the kidneys, liver, and heart, from the initial stages of cloudy swelling up to the highest degree of fatty degeneration. *Post mortem* examinations had supplied the anatomical explanation of the symptoms of intoxication by iodoform. Cloudy swelling of the same organs, and, in one case, of the epithelium of the lungs, has been observed. Clinically, too, the effects of the drug in disturbing the action of the kidneys had been observed and recognised, partly in the form of albuminuria, and partly in the form of a full representation of the symptoms of diffuse nephritis. Although Israel cannot adopt Senger's pessimistic views, he agrees that a warning is necessary, and that antiseptics should be applied in a milder form. A step in this direction had been taken by Neuber, of Kiel, who irrigated recent, not infected, wounds merely with a solution of common salt that has been boiled down. Further, Koeberlé and Lawson Tait had been eminently successful in abdominal surgery without using antiseptics. With fresh operation wounds careful disinfection may be confined to the skin, hands, and instruments—in short, to anything that comes into contact with the wound. Thus infection by contact is guarded against, and infection by the air is of no importance. It is quite a different matter when you come to prevent the spread of existing infection, *e.g.* in phlegmonous processes, or to protect a recently made wound in connection with communication with the intestine or cavity of the mouth from subsequent infection. In such cases chemical disinfection is indispensable. Perhaps a drug may still be found that shall destroy germs without injury to the organs. Israel says that Senger has totally misunderstood his hypothesis of reflex anuria, when he says that his theory is untenable in cases where there has been a cessation of urine secretion after extirpation of a kidney, for Israel had stated expressly 'that in anuria after extirpation there is too great a complication of factors for us to regard it as a certain proof of reflex anuria.' The cases on the other hand in which Israel maintains the probability of a reflex origin of anuria, stand in no kind of relation to Senger's subject of the poisonous effects of antiseptics, for they represent the complete cessation of secretion in both kidneys in consequence of one-sided nephrolithic constriction in patients who have never undergone operation, and have, therefore, never needed the application of antiseptics.

Dr. E. Küster remarked that Senger had spoken in such a way as to leave the impression that surgeons relied on antiseptics without any just reason, and disregarded the dangers connected with their use. That might be true of the time when antiseptics were first introduced, before a knowledge of their nature became general. Even in 1875, at the congress of surgeons, few dared to point to the danger, and at the International Congress later on Lister utterly denied that there was any danger in using carbolic acid. With regard to sublimate and iodoform the drawbacks were more quickly recognised. If, following Senger's advice, we were to throw the antiseptic treatment of wounds overboard, Küster says we might certainly avoid the dangers of antimycotics, but would incur the far greater danger of wound diseases. Senger is wrong in his description of the application of antimycotics.

Few surgeons during an operation keep up a stream of sublimate, generally, indeed, withdrawing it after the first incision, and only applying it at the end of the operation for a short time to the wound, from which it is then removed by sponges. Iodoform is usually applied with a sponge, which, having been rolled through it and then shaken, is carried lightly over the wound. If this method were dangerous, statistics would show it. But the fact is that for six or seven years there have been no cases of iodoform intoxication. Even von Bergman's so-called acid sublimate treatment is not accompanied by such danger as Senger describes.

In reply, Dr. Senger said all operations might be divided into two groups. In the first group strong antimycotics were applied, and these were the less

dangerous operations. In the second group weaker solutions, particularly of boric and salicylic acid, were used. Antiseptics were introduced with the intention of killing any fungi that might have settled in the wound—in short, to disinfect. Antimycotic treatment was supported by the classical researches of Koch. Perhaps, however, it would be better, from the practical surgeon's point of view, to establish a basis by means of experiments in the disinfection of pus cocci. No doubt strong antimycotic solutions, such as sublimate and carbolic acid, destroy the staphylococcus aureus, but the weaker solutions do not effect this, though where they are employed there is a greater, nay a fatal, danger from a faulty antisepsis. Just in such cases in which strong solutions should be applied, they are inadmissible on account of the danger of poisoning; and again they are applied when they are much less needed. The theory and practice do not harmonise. To kill a pus coccus that has fallen into the abdominal cavity, washing with a 4 per cent. solution of boric acid is not sufficient, for you could let the man lie immersed in such a solution for five days and not accomplish that object. The same may be said of salicylic acid. Yet the results of operations in the abdominal cavity are excellent, and Senger believes that it is only necessary to wash the wound with sterilised water. He lays no particular stress on the common salt solution. The disinfection of a living tissue he considers to be impossible. Either the tissue is free from germs, in which case there is no need of an antimycotic, or it is infiltrated with pathogenic fungi, in which case it is impossible to destroy the fungi without at the same time seriously injuring the tissue. Disinfection answers admirably on dead objects, but in the case of living organs more importance must be attached to vital energy. Did not Virchow, at a time when it seemed as if the whole of pathology depended on pathogenic bacteria, especially direct attention to the conflict between the cells and bacteria? Surgical examination showed this in wounds in connection with syphilis, tabes, diabetes, and other exhausting diseases, so that, in spite of the strongest antiseptics, it was impossible to prevent purulence and purify the wound, because the energy of the cells had much abated and disinfection was impracticable. By all means let dead objects, such as instruments, the operating room, &c., be thoroughly disinfected, but after the first incision no antimycotic whatever should be used. In how far these theoretical demands can be met in practice must be decided by those who have great opportunities of practice. The latter alone can determine the cases in which antimycotics are indispensable; but the general rule of avoiding their use should be observed. JOHN ELLIOTT.

ARTICLE 926.

KNOWSLEY THORNTON ON THE ROTATION OF OVARIAN TUMOURS.*

IN 600 ovariotomies, Mr. Thornton met with no less than fifty-seven cases of twisted pedicle. He has operated six times during pregnancy, and in five of these cases the pedicles were twisted. In nine other cases the acute symptoms caused by twisting were associated with pregnancy or delivery, beginning, as a rule, shortly after parturition or miscarriage. In eight cases only was there no history of a sudden attack of pain followed by more or less severe illness. In twenty-eight of the fifty-seven cases the right ovary was the seat of the tumour, in twenty-eight the left ovary, and in one case both ovaries were the seat of tumours with twisted pedicles. Mr. Thornton comes to the following conclusions, after duly considering his own cases and the experience and theories of others. Rotation of ovarian tumours is of frequent occurrence, Rokitansky's observations on the dead showing that it occurs in over 13 per cent., and Mr. Thornton's, on the living, that it occurs in about 9½ per cent. of all ovarian tumours. The difference in the percentages is due to the fact that, early ovariotomy being now the rule, more tumours are removed before they have a chance of rotating than at the time when Rokitansky made his observations, and to the second fact that a certain number of cases will probably die of the complication, and such cases do not come into Mr. Thornton's tables. Rotation occurs with greater frequency during the period of active menstrual life than at the two extremes, and more often in married than in single women. It is so frequently associated with pregnancy that this condition must be considered a predisposing cause. It is also especially apt to occur with dermoid tumours. [In eight out of Mr. Thornton's fifty-seven cases the tumour was dermoid (over 14 per cent.); in his 600 ovariotomies the total number of dermoids was forty, over 6½ per cent.] Adhesions are the rule whenever the acute stage has been reached, but there are some few exceptions. ['Exactly a fifth of my cases had no adhesions; several of these were only partially twisted, and in only one of the non-adhesive tumours was the pedicle completely obstructed, and in that one there was a very clear history of a gradual twist, the symptoms recurring at each monthly period'], and slight twisting does not seem to cause adhesions. Not infrequently the circulation throughout the pedicle is entirely cut off, but a fresh blood-supply is soon obtained, as a rule, through the adhesions. Tumours of the right and left ovaries are equally liable to rotation, and may twist either to the right or to the left, but the turn from right to left seems most common on the right side, and from left to right on the left side. There is no certain evidence as to the motor force which first starts the rotation, and it seems improbable that this can ever be exactly settled, but different causes may act in different cases. Rotation at first causes no symptoms; then suddenly serious symptoms set in, the tumour increasing. The bulk of the tumour, after a time, decreases or remains stationary, then once more may increase, as the circulation through adhesions becomes free enough to replace the diminution or arrest of the circulation through the pedicle. [Freund denies that the blood-vessels in adhesions are ever sufficient to do more than just maintain the tumour, except when it is malignant. Increase in bulk, in non-malignant tumours, does not signify anything more, in his opinion, than congestion or hæmorrhage into the substance of the growth, or into a cyst cavity.—*Rep.*] Separation of the pedicle and transplantation of the tumour is the extreme result of rotation. Gangrene of the tumour never results from twisting of an ovarian pedicle unless there be some element introduced from without, as when the tumour has been

* THORNTON, J. KNOWSLEY.—On Rotation of Ovarian Tumours: Its Ætiology, Pathology, Diagnosis, and Treatment. (*American Journal of Medical Sciences*, October 1888.)

tapped. Otherwise twisting of the pedicle would be far more fatal than statistics prove it to be. (There were only four deaths in Mr. Thornton's fifty-seven cases, and in two of the fatal cases the cyst had been tapped; in one of these the tumour was sloughing.) Even in sudden and complete obstruction of the arterial and venous circulation, with great effusion of blood into the substance of the tumour, acute peritonitis may kill the patient without any sloughing of the tumour; whilst, as a rule, the patient recovers, the tumour being nourished by adhesions.

Alban Doran.

Article 927.

WILLIAMS ON THE TREATMENT OF BRONCHIAL ASTHMA.

In the *American Journal of the Medical Sciences*, August 1888, Dr. Theodore Williams contributes an interesting article on the treatment of bronchial asthma. The author lays down the following rules to be observed. 1. To counteract, if possible, the tendency to asthmatic attacks, which arises generally from some definite lesion the result of a former inflammatory attack. 2. To allay, and keep allayed, the asthmatic spasm; this is principally done by removal of the patient from the various exciting causes of the attack, but also by reducing the sensibility of the pulmonary plexus of nerves. Hyde Salter states that 80 per cent. of cases of asthma are traceable to bronchial inflammation in childhood, following on whooping-cough, measles, bronchitis, or broncho-pneumonia, and in adults asthma often follows upon phthisis. The most probable cause of this sequence is that all these diseases give rise to swelling of the bronchial glands, the position and relation of which are such that they cannot enlarge to any great extent without causing pressure on the vagi and their branches. Preparations of iodine are singularly efficacious, both in reducing the frequency of asthmatic fits, and also in causing the absorption of lymphatic glands, if administered in sufficiently large doses, and the author finds that iodide of potassium, given in doses of eight to ten grains three times a day, sometimes for a considerable period, is most efficacious in reducing attacks of asthma. If the iodide be given in plenty of water, the chances of iodism are very remote, and in many cases no benefit is obtained until symptoms of slight iodism are produced. Various mineral waters, containing iodine in some form, exercise a favourable effect, but are slower in their action. Such are the Woodhall and the Purton in England, and the waters of Kreuznach in Germany. The indications for prescribing iodide of potassium are (1) the absence of catarrh and bronchitis, (2) the well-marked presence of the neurotic element, and (3) the detection of dulness along the right or left edge of the first portion of the sternum, or in one or both interscapular regions, showing enlargement of the bronchial glands. Another medicine of great use in reducing the predisposition to asthma is arsenic, and it may be combined with the iodide. The treatment of the attack generally resolves itself into the administration of antispasmodics, which may be classified as stimulant and sedative. Stimulants appear to act by promoting large bronchial secretion and expectoration, but the sedatives are the most valuable in reducing the asthmatic spasm. The popular method of smoking cigarettes or inhaling the fumes of pastilles made of these drugs, is not so certain as taking them internally, and Dr. Williams considers that the best way to combine stramonium, belladonna, or henbane is to give the succus or tincture with the iodide of potassium during the day, and at night, during the attack, to give a pill of extract of stramonium (gr. $\frac{1}{2}$), or belladonna (gr. $\frac{1}{3}$). Of the various sedatives to be used during the attack, *chloral* is one of the safest and best; it should be given in a dose of 20 to 30 grains as soon as the signs of an attack are noticed. When the paroxysm is very severe, chloroform, or ether, or iodide of ethyl may be inhaled, and Martindale's capsules of chloroform (♏ x.) and iodide of ethyl (♏ iij. to ♏ v.) are specially well adapted to the purpose. The old-fashioned remedy—viz, the ethereal tincture of lobelia, in drachm doses every four hours while the spasm lasts, is very useful.

The application of a rarefied or compressed atmosphere in bronchial asthma has of late years been gaining ground, and at the Brompton Hospital there is a specially constructed chamber where this treatment is carried out, and it can be used by private as well as by hospital patients. The only drawback is that no good can result unless the baths are taken for at least three to six months. The dietary which suits most asthmatics best is that which limits them to two meat meals—namely, breakfast and lunch or early dinner, and restricts their food for the rest of the day to liquids, with only bread, toast, or biscuits as solids, the great principle being that the asthmatic should retire to bed with gastric digestion quite complete, and thus avoid any pressure upward against the diaphragm from flatulent distension. Black coffee is good for asthmatic patients, but tea is often harmful. To many asthmatics climate is everything, but it is often most perplexing to the medical adviser to select a place, and it is best to leave it for the patient to find out by practical experience. It is a well-known fact that smoky towns are often the best places for asthmatic people, but there are many exceptions; some like a high altitude, some the warm climate of the South of France, and it is a good plan for those who are able to travel to move about until they find a place that suits them, and to try and settle down there as much as possible.

Richard Neale, M.D.

Article 928.

THE INTERNATIONAL OTOLOGICAL CONGRESS.

The fourth International Congress of Otologists was held at Brussels from September 10 to September 14 last. In the opinion of those able to judge it surpassed all previous meetings of this description in the amount of work accomplished, as well as in the attendance of members.

In this article we can only refer briefly to a few of the communications; a full account of the work done must be left to a future occasion. Amongst the communications on the normal and pathological anatomy of the ear Professor Politzer (Vienna) contributed the results of some elaborate researches on the pathology of the middle ear, and also showed a series of his beautiful specimens illustrating the anatomy of the ear. Professor Gradenigo (Padua) read an elaborate paper on the development of the auricle in man and mammals. Dr. Fritz Röhrer (Zürich) gave a demonstration of the microbes

in purulent inflammation of the tympanum and meatus and in chronic rhinitis. Dr. Hartmann (Berlin) read a paper on polyotia. Professor Urban Pritchard (London) gave a demonstration on the screen of some microscopic preparations of the cochlea of birds and mammals. Dr. Siebemann (Basle) showed various aural fungi which he had successfully cultivated, also metallic casts of the internal, middle, and external ear. Under the head of physiology there was an interesting paper by Dr. Gellé (Paris) on binauricular reflexes, and as the result of numerous observations in the clinic of Professor Charcot, he concluded on the existence of a reflex oto-spinal centre in the cervical region. The suppression of this reflex might, he thought, be a means of diagnosis in pachymeningitis. Dr. Röhrer gave another paper on the significance of Rinne's test for the diagnosis of labyrinthine affections. Professor Guye (Amsterdam) spoke on the sonorous shadow as a cause of error in measuring the acuteness of hearing.

Pathology and therapeutics occupied naturally the larger part of the time of the meeting, and comprised amongst others the following papers and demonstrations. Dr. Luis Sunè y Molist (Barcelona) on affections of the ear consequent on injuries to the inferior maxilla. Dr. Bayer (Brussels), contribution to the study and treatment of empyema of the antrum of Highmore. Dr. Menière (Paris)—1. On dilatation of the Eustachian tube. 2. On the employment of the galvanic cautery in the treatment of periostitis of the mastoid process. Dr. Moure (Bordeaux) on the influence of sea air on diseases of the ear and Eustachian tube (a paper which gave rise to an animated discussion in which various opinions were expressed). Professor Cozzolino (Naples) papers on mental troubles caused or sustained by diseases of the ear and on other subjects. Professor Böke (Buda-Pesth) on treatment by pilocarpine and on diseases of the ear in typhus and their treatment. Professor Knapp (New York) on fibrous tumours of the lobule of the ear. Mr. Cresswell Baber (Brighton) on the local application of alcohol in diseases of the nasal cavities. Dr. Carlo Secchi (Boulogne) on vaso-motor rhinitis. Dr. Sapolini (Milan) on a method of treating hypoacusis in old age. Professor Chas. Delstanche (Brussels), a paper on the treatment of sclerosis by means of systematic rarefaction of the air in the auditory canal, and a clinical demonstration of his method of applying the same.

Dr. Thomas Barr (Glasgow) read a paper on the surgical treatment of cerebral abscess resulting from ear disease, in which he related two cases which had been successfully operated upon by Dr. McEwen. This paper attracted considerable attention, and on the proposal of Professor Guye, the English School of Surgery was congratulated on its success. Dr. Lawrence Turnbull (Philadelphia) related a case of necrosis of a part of the mastoid cells, and complete removal of the labyrinth, with paralysis of the facial nerve, and partial recovery of hearing. Professor Guye (Amsterdam) spoke on the origin of plugs of cerumen. Other papers were read by Drs. Randall (Philadelphia), Laroche (Brussels), Délie (Ypres), &c., and instruments were shown by Drs. Luis Sunè y Molist, Cozzolino, Delstanche, Gellé, Hartmann, Cresswell Baber, and Suarez de Mendoza. Altogether fifteen hours were devoted to the formal reading and discussion of papers ; one sitting was held at the physiological laboratory at the University for anatomical and pathological demonstrations, and another for clinical demonstrations and exhibition of instruments at the Hôpital Saint-Jean.

The business of the Congress commenced with an address from the President of the Committee of Organisation, Dr. Chas. Delstanche, in which feeling allusion was made to the premature death of Dr. Burckhardt-Merian, of Basle, the president of the third Otological Congress. Dr. Charles Delstanche was then elected President of the Congress, and Drs. Felix Delstanche and Sapolini, honorary presidents. It was subsequently decided that the next Congress should be held at Florence in 1892, and the following three subjects were selected for special discussion on that occasion, viz.:—1. The pathological anatomy of inflammation of the internal ear. 2. The diagnosis and therapeutics of cerebral abscess in relation to ear disease. 3. The constitutional treatment of aural disease.

These meetings have a very distinct value, not only in promoting exchange of ideas, but also in stimulating scientific work and observation in the specialty. They afford too a very pleasant social recreation and amusement, which in this case was fully sustained by the indefatigable courtesy of our Belgian *confrères*. E. Cresswell Baber, M.B.

Article 929.

FÜRTH ON AN OPERATION DURING HYPNOTISM.

Dr. Julius Fürth reports in the *Wiener med. Wochenschr.* July 29, 1888, the following case:—Anastasia C., aged eighteen years, came into hospital with prepatellar bursitis, which disappeared without suppuration after a few days of quiet and antiphlogistic treatment. But as she complained of pains in the abdomen the latter was examined. Sensitiveness to pressure on the ovaries, spinal irritation and isolated hyperæsthesia of the left mammary gland, as well as general insensibility to needle-pricks, led to the diagnosis of hysteria. The patient had never suffered from hystero-epileptic attacks. An attempt to put her into hypnotic sleep directly after the examination was successful. The patient, who had no idea of what was intended, was asked to fix her eyes on the doctor's finger. In a few minutes she was in a deep sleep, and did all the hypnotic feats. All her movements and actions were under the doctor's complete control, but she stubbornly resisted all hallucinations that were suggested, such as mistaking salt for sugar, or an egg for an apple. She paid attention only to Dr. Fürth, and not to his colleagues. For instance, if they tried to make her put down her arm that he had stretched out straight, it always went up again with a spring, but if he pressed the arm down, she let it remain so. Fürth's order that she should have no more pain in the abdomen, she obeyed only after some resistance, and the suggestion that the pain would never return was not accepted. Fürth further found during hypnotism that there was general hyperæsthesia, for the patient resisted needle-pricks or even mere touching. The order given after two hours of the sleep to awake and get up was obeyed with really astonishing celerity. There were no bad effects from this and subsequent experiments. The patient had behind her left ear a flat immovable cicatrix of the size of a florin, which was both painful and disfiguring. It was proposed to remove this, and the

patient consented when she heard the operation would be painless. Before a large assembly she was hypnotised, in the same way as before, in a few seconds, and preparations were made for the operation. To prevent her from disturbing the operator by throwing her arms about, Fürth gave her a pretty sharp blow on each shoulder-joint telling her that both her arms were paralysed (traumatic suggestion). When she was asked by someone to lift her arms she was unable to do so. As she was rendered hyperæsthetic by hypnotism, it was necessary to suggest anæsthesia, which was done by repeatedly and forcibly telling her to feel nothing more. The patient obeyed, and the operation was done; the suggestion to feel nothing being given from time to time. When the operation was done Fürth told her to take off her dress that had been soiled with blood, but she was unable to do so; he had forgotten that she had been told that her arms was paralysed. By stroking the arms gently, and telling her that they could now be moved, she was induced to obey the order. She now changed her linen, got down from the operating table, put on her slippers and allowed herself with her eyes closed to be led off to bed, when she continued to sleep quietly. Fürth now told her that the operation was over and that she must awake in an hour and that she must then feel no pain. As she was awaking she was told that the wound must not suppurate. While she was sleeping for the hour allowed, she called Fürth and asked to have something to drink as she was thirsty. Water was given, which she drank with great relish. A few minutes before eleven (the time at which she was to awake) Fürth asked her why she did not awake, upon which she replied that a few minutes were wanting to the hour. Just as the sickroom clock pointed to eleven she jumped up suddenly. She had no pain, and the wound did not suppurate. The latter may of course not have been the effect of the suggestion.

Fürth claims no great practical results from this case, but he feels justified in maintaining that for surgical purposes hypnotism should be tried in such cases in which chloroform is either not admissible or not practicable. The objection that hypnotism is not always successfully attempted is of no force. It is well known that very few people can resist it, and the majority can be trained to it. There may be objections on account of bad after-effects of hypnotism. But in this case there were absolutely none. JOHN ELLIOTT.

ARTICLE 930.

STEFANI AND SIGHICELLI ON THE MANNER IN WHICH THE VAGUS MODIFIES THE RESPIRATORY RHYTHM WHEN THE PRESSURE IN THE LUNG IS INCREASED, AND WHEN IT IS DIMINISHED.

A SERIES of experiments on rabbits have been carried out by Professor Stefani and Dr. Sighicelli in the Physiological Laboratory of the University of Ferrara with a view of elucidating this question, and a long article in *Lo Sperimentale*, July 1888, is the result. The following consists of the opening propositions, and of the conclusions at which they have arrived.

It has been shown: 1. That section of the vagus is followed by a notable slowing of the respiratory movements, which at the same time become deeper. (Legallois, Marshall Hall, Traube.)

2. That stimulation of the central end of the divided vagus sometimes is followed by inspiratory movements (Marshall Hall); or, more precisely, if the stimulation is weak it accelerates the respiratory movements; if it is strong it arrests respiration in the act of inspiration. (Traube and Rosenthal.)

3. In other cases stimulation of the central end of the divided vagus produces movements of expiration and arrests respiration in the act of expiration.

Relying on the facts indicated in 1 and 2, Traube regarded the pulmonary vagus as a nerve producing, reflexly, exclusively inspiratory movements. Budge, on the contrary, relying on the facts in 3, considered it an expiratory nerve.

Pflüger and Burkart, reviewing the whole subject, came to the conclusion that the vagus contained two sets of fibres, one inspiratory, and the other expiratory.

Rosenthal attributes to the pulmonary vagus the office of diminishing a hypothetical resistance which normally opposes the transmission to the inspiratory muscles of the continuous excitation of the respiratory centre; and so he considers that it increases the frequency of respiration.

Marvkald supposes that the vagus transforms the continuous excitation of the respiratory centre, which would result in tetanus or respiratory cramp, into rhythmical action.

And finally, Gad considers that the vagus reflexly arrests the action of the respiratory centre and thus diminishes the frequency of respiration and prolongs the expiratory pauses.

It is evident, therefore, that there is at present nothing approaching unanimity as to the function of the pulmonary vagus.

A notable advance was made in the method of experimentation by Breuer and Hering, who substituted for stimulation of the divided ends of the trunk of the nerve, the irritation of its peripheral terminations in the lung by distension of the pulmonary tissue. As a result of their investigations, Breuer and Hering came to the conclusion that there were in the pulmonary vagus two sets of fibres, the one inspiratory in function, and the other expiratory; and that the distension of the pulmonary tissue in inspiration stimulated the expiratory fibres resulting in the act of expiration, while the approximation of the pulmonary tissues in expiration stimulated the inspiratory fibres and excited the act of inspiration.

Acting upon this hypothesis Professor Stefani and Dr. Sighicelli have carried out a long series of experiments, and the following are the conclusions at which they have arrived.

1. That a slight increase in the endo-pulmonary pressure without distension of the lungs produces reflexly through the vagus a pause, and then an inspiration.

2. A greater increase, with distension of the lungs, causes expiration, an expiratory pause, and then an inspiration, which usually succeed one another as stated, but the order may vary somewhat.

3. A diminution of the endo-pulmonary pressure produces a deep thoracic* inspiration which is rapid and energetic.

Clinically two forms of dyspnœa are readily dis-

* The authors elsewhere point out that the innervation of thoracic respiration is very largely independent of the innervation of abdominal respiration.

tinguished : a dyspnœa of frequency, and a dyspnœa of depth. The former occurs when the respiratory area is diminished, the latter when there exists some obstruction in the respiratory passages. According to the conclusions of the authors, the explanation of these phenomena is as follows :—In the dyspnœa of depth, due to an obstruction in the main respiratory passages, at the beginning of expiration there is a notable increase in the endo-pulmonary pressure, because the air contained in the lung is compressed by the expiratory force against the obstruction to its exit from the respiratory tract. In such a case we have, then, an increase of the endo-pulmonary pressure with dilatation of the pulmonary tissue ; and, in consequence, according to the author's experiments, there should be a deep expiration followed by a long pause, and afterwards by an inspiration. And this is exactly what happens. In this case the act of inspiration is also rendered deeper for another reason. The inspiratory dilatation of the lungs, when there is an obstruction in the main air-passages, must be accompanied by a rarefaction of the air contained in the lungs, because of the resistance which the obstruction opposes to the ready establishment of an equilibrium of endo-pulmonary pressure. And the rarefaction of the air in the lung causes, as we have seen, a deep inspiration.

In the dyspnœa of frequency, when the respiratory area is diminished, the respiratory passages remaining freely open, the variations in endo-pulmonary pressure during inspiration and expiration become less than normal, and hence the acts of inspiration and expiration are less deep, and the expiratory pause is wanting, because the increase of pressure which determines it is wanting also.

H. Handford, M.D.

Article 931.

KUMAGAWA ON THE INFLUENCE OF ANTIPYRETICS ON ALBUMEN ELIMINATION.*

1. *Benzoate of Soda.*—This salt, administered in non-toxic doses to a dog in a normal state of nourishment, produces an increased elimination of albumen (mean increase, 2 to 5 per cent. ; maximum, 19 to 22 per cent.). The action is more marked when the state of nourishment of the animal is poor. Half the absorbed benzoic acid reappears as hippuric acid, the remainder being eliminated without alteration.

2. *Pure Benzoic Acid.*—This acid produces also increased albumen elimination (mean increase, 6 to 8 per cent. ; maximum, 17 to 20 per cent.), the only difference between it and the salt being the somewhat more powerful action of the former. Half is eliminated as hippuric acid, the rest is unchanged. The antiseptic action on the alimentary canal is powerful, the amount of combined sulphuric acid in the urine sinking to 20 per cent. of the normal, and the number of bacteria to one-sixth of the normal. The amount of indican in the urine is decreased.

3. *Salicylate of Soda.*—Administered in non-toxic doses to a well-nourished dog, this produces—(*a*) increased elimination of albumen (mean increase, 10·6 to 13·4 per cent. ; maximum, 19·8 to 21·3 per cent.) ; (*b*) a strongly-increased elimination of uric acid (mean increase, 31 to 45·6 per cent. ; maximum, 57 to 74·4 per cent.) ; (*c*) an increase of the so-called reducing substance (Fleischer) in the urine (mean increase, 60 per cent. ; maximum, 77 per cent.) ; (*d*) an increased elimination of sulphates in the urine (mean increase, 7·2 to 13·7 per cent. ; maximum, 18·6 to 25·9 per cent.) ; (*e*) an increase of the total sulphuric acid in the urine (mean increase, 10·6 to 19·6 per cent. ; maximum, 28·5 to 38·9 per cent.). In the period after the administration of the salt there was a corresponding decrease in the elimination of all these substances, which compensated for the previous increase. The relation of the sulphates in the urine to the nitrogen remains constant during that period of the administration in which daily any equal quantity of the albumen taken with the food was oxidised. But when organic albumen besides that of the food is destroyed, the relation becomes much more irregular. Nevertheless, the average elimination of one and the other remains approximately equal. The same is true for the relations of the total sulphuric acid to the nitrogen, and to the total sulphates. During all the periods about two-thirds of the total sulphur compounds are eliminated as sulphuric acid. The antiseptic action of the salicylate of soda on the alimentary canal is not very clearly distinct, probably on account of its rapid re-absorption. Hippuric acid exerts no influence on the elimination of albumen.

4. *Salol* (Salicylsäure phenyläther).—A great increase in albumen elimination is produced by this drug (mean increase, 19 per cent. ; maximum, 41 per cent.). It is poisonous to the dog. 27·0 g. of salol in nine days, given in doses of 3·0 g. *per diem*, or 0·109 g. *pro* kilo. of body-weight, killed a dog of 27·5 kilos. This poisonous action on the dog appears to depend upon the salicylic acid separated from it. The antiseptic action of salol on the alimentary canal is not very distinct.

5. *Antifebrin.*—In small doses (2–3 g. *per diem*) this drug produces no obvious alteration in the elimination of albumen in the dog, but after larger doses (4–5 g. *per diem*) a very considerable increase occurs (mean increase, 30·8–35·7 per cent. ; maximum, 77·7–78·8 per cent.). The increased elimination of 46·0 g. of nitrogen during the administration of antifebrin (corresponding to 1353·0 g. of meat or animal tissue) was exactly equalled by the decreased elimination of a similar amount during the twenty-five succeeding days. In forty-nine days of observation, during which very considerable loss of organic albumen and restitution of the same took place, no marked deficiency of nitrogen was observed. In considerable loss of the organic albumen the elimination of sulphates followed irregularly and much later than that of nitrogen, though both substances were derived from the same albumen. The internally administered antifebrin was re-absorbed completely even in large doses from the intestine, and in the course of twenty-four hours almost completely eliminated by the urine. The elimination by the urine occurs sometimes as paramidphenol-sulphuric acid. Neither antifebrin nor anilin is appreciable in the urine after the administration of the former. Antifebrin has a powerful antiseptic action upon the contents of the alimentary canal, and also in catarrh of the bladder. The number of bacteria in the former was reduced to $\frac{1}{37}$th of the normal. Large doses of antifebrin produce in the dog no toxic effects save those of great loss of albumen, with corresponding emaciation.

* 'Ueber die Wirkung einigen antipyretischen Mittel auf den Eiweissumsatz im Organismus.' Von Dr. Muneo Kumagawa. (Virchow's *Archiv*, Band cxiii., Heft. 1, p. 134.)

6. *Chinin.*—This drug produces a decreased elimination of albumen. The elimination of nitrogen during the administration of chinin decreased to 8·5-16·1 per cent., that of uric acid 13-50 per cent.

7. *Antipyrin.*—The administration of antipyrin produced in a healthy dog even in large doses (51 g. in sixteen days) neither decrease nor increase of the total nitrogenous elimination in the urine, but, on the other hand, a marked increase in the elimination of uric acid (mean increase, 65·2 per cent.; maximum, more than double the normal). The author is uncertain how this can be explained. Large doses of antipyrin were well borne by the dog, quickly absorbed, and as quickly eliminated by the urine.

8. *Thallinum Sulfuricum.*—The administration of this salt produced in the healthy dog increased elimination of albumen (mean increase, 6·6 per cent.; maximum, 25·8 per cent.). It was rapidly absorbed and eliminated by the urine as a combined sulphate even in large doses.

Bertram C. A. Windle, M.A., M.D.

Article 932.

ROSENBERG ON THE TREATMENT OF LARYNGEAL PHTHISIS.

In the *Therapeutische Monatshefte*, Hefte 7 and 8, 1888, Dr. Albert Rosenberg returns to the important subject of laryngeal phthisis and its treatment by menthol. He first relates briefly a case of spontaneous recovery from this disease which was under the care of Prof. Fraenkel. The ulceration which was situated on the false vocal cords healed with the formation of a membranous band, extending across from the lower surfaces of the ventricular bands and leaving only a round opening of the size of a penholder (*sic*) through which respiration took place. There were no signs of syphilis, and bacilli were found in the sputum. After reverting to the various local applications recommended in laryngeal phthisis, the author gives a table showing all the cases treated with menthol at the Berlin University Policlinic, from June 1, 1885, to February 1, 1888. Of the fifty-seven cases enumerated only about twenty were available, chiefly from the patients attending irregularly and staying away after having been seen only a few times. All of these twenty, however, improved under treatment. In nine, actual recovery took place, *i.e.* the infiltrations disappeared, the ulcerations cicatrised, and existing subjective troubles vanished. In all the cases included in the table the diagnosis was confirmed by the presence of bacilli. The most rapid in healing are the ulcerations, but of these the most obstinate are those on the posterior laryngeal wall. Infiltrations are more resistant, but they often diminish gradually. Commencing perichondritis on the arytenoid cartilages often disappears entirely. The duration of the treatment is from four weeks to four months. A comparative test of the action of menthol and of lactic acid was made in a case of tubercular ulceration of the velum palati, one-half of the palate being painted with either drug. The menthol side healed more rapidly, and was much less painful than where lactic acid was applied. In regard to the important question of recurrence, Dr. Rosenberg reports on the present condition of some of the patients mentioned in his previous communication. In one case, in which the patient ran to excess *in baccho et venere*, there has been recurrence; in eight others the ulcers have remained healed, five since March, May, or June 1886, and three for the period of one year. One patient, who came with extensive laryngeal ulceration and advanced disease of the lungs, died after about six weeks' treatment. The preparation shows, on the posterior wall, an ulcer the size of a bean completely cicatrised, in addition to another unhealed, to which, from its direction, the menthol could not be so well applied. With these exceptions, all the patients he has had an opportunity of watching have remained healthy. In phthisis pulmonalis he recommends tracheal injections of a 10-per-cent. solution of menthol in olive oil, combined with frequent inhalation of the drug, by means of a special inhaler, which vaporises the menthol and allows it to be inhaled at a temperature between 40° and 50° C. He cautions against the use of any but Asiatic menthol, and considers that this drug is as efficacious as lactic acid, while at the same time it is more easily applied. E. Cresswell Baber, M.B.

Article 933.

BROWN ON AUTO-INTOXICATION IN DISEASE.

In the *Provincial Med. Jour.*, Oct. 1888, p. 434, Dr. Brown contributes an interesting article on the subject of auto-intoxication in disease. Professor Bouchard has lately published a course of lectures based on the *Mémoires* of Peter and Gautier, whence this new departure in pathology has arisen. It aims at conducting analysis of morbid phenomena with a view to ascertain how far they may be productive of or dependent on the action of material obnoxious to nutrition and nervous reaction, and to demonstrate that, whether introduced into the system from without or resulting from perversion of metabolism, secretion, and elimination from within, these poisonous principles explain the origin and mechanism of much of what is called disease. Bouchard commences by observing that man constitutionally and naturally possesses in himself much that is both potentially and actually morbid. His vital condition may be abnormal—in other words, nutrition may be defective; its vitiations or derangements being either hereditary or acquired. The organism may be morbidly affected by external causes, physical, mechanical, or chemical, as by wounds, burns, poisons—causes which, by operating directly on the cells, excite immediate reactions. These pathogenic processes rarely remain simple, they are rendered complex by reason of mere reflexes. External causes may also act on the economy indirectly through the medium of the nervous system. Finally the economy may be invaded by contagious or infectious elements. Intoxication, when acting primarily, is included in these four pathogenic processes, but the process of disordered nutrition, as well as those of nervous reaction and contagion or infection, may also cause intoxication. Seeing the importance of the part played by disordered nutrition, nervous reaction, and putrefactive infectious processes continually at work in the economy, we are confronted with physico- and bio-chemical processes of animal organic growth and decay, their chemical products, particularly those now known as *Ptomaines* and *Leucomaines*, and finally with the fact that in life as in death,

so-called aerobic and anaerobic processes co-exist, apart from and irrespective of bio-chemical interjectional activities; that in the higher animals and man, cellular life, to a very notable extent, is independent of inspired oxygen; that the anatomical elements undergo their transformations and other phenomena of oxidation, but that it is in the organised substance they find it. It is now estimated that at least one-fifth of the vital processes is maintained by oxygen, which is not directly derivable from without, but from within; that the processes of metabolism and disassimilation are in a notable part carried on by processes analogous, if not identical, to those of putrefaction or fermentation. The resulting products of disintegration are taken up by the lymphatics and are thrown into the blood, to be eliminated by the skin, lungs, kidneys, and bowels. Thus all poisons come through the blood, and Bouchard has shown that man would die from poisoning if the blood contained ten times more toxic material than it normally contains. This applies to the plasma; its cells, like all other cells of the organism, contain elements potentially deleterious. The constituents, however, can only be set free by disassimilation or destruction of the cells themselves; some are remarkably toxic and form two orders—the *organic*, largely alkaloid; the *inorganic*, mineral matter. In co-operative elimination and emunction there lies the safeguard of the economy. Bouchard found the urine toxic, and conducted a series of experiments on animals, and in doing so has endowed pathology with a new term—*urotoxy*, *i.e.* the standard of toxity of urine necessary to kill a kilogramme of living substance. In this way he establishes the fact that urine per kilogramme fabricates in twenty-four hours sufficient toxic matter to kill 464 grammes of living substance, or nearly the half of what would kill himself in forty-eight hours. Night-urine is denser and richer in solid material, and always less toxic than day-urine. During sleep man eliminates from two to four times less poisonous material than he does during an equal time of wakefulness or cerebral activity; further, the toxicity of night and day urine not only differs in quantity and quality, they are also antagonistic in their action, and neutralise each other. The urines of the sleeping hours are always distinctly convulsivent—*stimulant*—while those of the working hours are oporific—*narcotic*. The organism, by this mechanism, thus eliminates during wakefulness material which, if accumulated in the system would induce sleep, and during the hours of sleep eliminates that which would induce wakefulness. Urine contains several poisons; one is a diuretic, one a narcotic, one a sialogenic, two are convulsivent, then comes a body which induces contraction of the pupil, and, lastly, there is an agent which reduces temperature. The author enters into the method and mechanism of the formation of these toxic agents, and shows how the liver and intestines are intimately connected with their production and elimination, both in health and in disease. The treatment of auto-intoxication draws largely on the antiseptic method, and further researches in this subject will be looked forward to with great interest. RICHARD NEALE, M.D.

MESSRS. BURROUGHS, WELLCOME, & Co. have received the 'Grand Diploma of Honour' for their preparations shown at the Sanitary Exhibition, now being held in Ostend.

ARTICLE 934.

LUYS ON THE TRANSMISSION, FROM A DISTANCE, OF VARYING EMOTIONS, FROM ONE HYPNOTISED SUBJECT TO ANOTHER.

THE following is an abstract of the speech made by Dr. Luys at the meeting of the Biological Society of Paris, under the presidency of Professor Brown-Séquard, on June 23, 1888:—

One of the most curious phenomena that hypnotism has revealed in recent times is the possibility of transferring from one hypnotised subject to another, not only the various hypnotic states, but also emotions which are experimentally produced. This is a most interesting and important psychological fact, because it enables us to act from a distance on the emotional element of a hypnotised subject, and to modify, by means of a sympathetic chain artificially created, his or her varying emotional conditions. One can take a hypnotisable subject, preferably of the female sex (let us call her A.), and throw her into the lethargic condition. Then take a second subject (B.) and throw her into the same state. One is brought close to the other and contact is established between them by placing the hand of one in that of the other. If, then, one makes A. pass into a cataleptic condition, B. immediately passes into the same state and opens her eyes. And now one sees the most singular phenomena produced. The subject B., who is very impressionable, seeks to place herself under the influence of the gaze of A. This being accomplished, the two remain immovable for a few minutes, each looking intently at the other, and suddenly afterwards they relapse again into complete lethargy. If A. is reduced to the 'somnambulistic state,' B. immediately falls into the same condition and begins to converse with her companion. Next Dr. Luys repeated the experiments under altered conditions. The two subjects were placed at a distance of seven yards from one another, back to back, and thrown into the lethargic state. When B. was made cataleptic, A. became so also. If B. was thrown into the condition of somnambulism, A. followed at once, almost instantaneously. The interposition between them of a screen of cardboard had the effect of making the reactions somewhat slower. Finally, when B. was restored to her natural waking state, A. woke at once also.

Knowing that both the subjects, A. and B., had an equal antipathy for the colour blue, and an attraction for yellow, Dr. Luys threw them both into the lethargic condition, and presented to A. a blue glass ball. Active signs of dislike were manifested in B. as well as in A. With yellow, signs of pleasure were manifested equally in both. Dr. Luys also succeeded in showing that the effects of such drugs as alcohol and valerian, when produced by suggestion in one patient, could be similarly transferred to the other. After producing the symptoms of alcoholism in A. he saw the same phenomena arise in B., who was seven yards away, the two being placed back to back. Dr. Luys has repeated these experiments many times on numerous subjects and always with a positive result. He, therefore, concludes that there is a hyper-excitability of the emotions in the hypnotised, and that they are capable of being influenced by stimuli of extreme delicacy such as completely escape our senses.

[Quite recently I had the opportunity of witnessing the phenomena of hypnotism at the Salpêtrière, and I came to the conclusion that much of what I saw would in this country be called mesmerism. Still, it is no explanation of the really marvellous phenomena to give them a different name. I had every reason to believe that there was no collusion and no wilful deception. I saw numerous examples of the lethargic state and of the cataleptic, both occurring spontaneously and produced artificially. The artificially-produced conditions exactly resembled in many instances the conditions produced by professed mesmerists in this country. The spontaneously-occurring states I have seldom or never witnessed in England. Of course, all the subjects were markedly hysterical, and they became more emotional by being collected together. I could not learn that hypnotism was of much therapeutic value. With regard to the prospect of cure, I ascertained that the opinion was that, though the existing morbid manifestation might be removed, the hysterical disposition remained; that, in fact, once hysterical always hysterical, was the doctrine taught.—*Rep.*]

H. Handford, M.D.

Article 935.

MAGNANI ON AN ENDEMIC OF HYSTERIA AT ALBADIA.

The author (*Gazz. Med. Italiana*, September 1888) gives the following interesting account of an endemic of hysteria among the peasants of Albadia in Italy. Much excitement had been aroused in the neighbourhood, and the local priesthood had attempted to exorcise the evil spirits by religious ceremonies, but without success.

In a damp, imperfectly lighted hut lay three young girls and an old woman, who were said to be the most seriously affected with this strange evil, sleeping on some straw. Soon the greater part of the girls in the village who were subject to these attacks had collected in the hut, attracted by the news of the visit of the two strangers, one of whom was said to be a doctor. In a few minutes one of the girls fell down attacked with tonic and clonic convulsions; then another, rather younger, threw herself on the ground stretching out her arms; a third was seized with a sudden pallor and fell motionless; another, who had been laughing at the first, was herself seized with disorderly movements and contractions of almost all the muscles. Finally, in the course of an hour, fourteen girls of under 20 years of age, one boy of 11, and a woman of over 50 were attacked with convulsions of different degrees of severity. The attacks lasted generally about ten minutes. Two of the patients deserve further mention: the woman of 50 and a robust peasant of 19. The attacks, in the case of the former, commenced with rigidity of the muscles of the face and neck, and afterwards of the limbs; then she went through the most violent contortions and muscular movements, and, finally, sitting down, beat her chest with her hands, clapped her hands many times, and fell motionless. Sometimes this terminated the seizure, but sometimes she repeated it in exactly the same way again and again. She said that during the attacks she always saw the figure of the woman who had bewitched her and her companions. The other case was a typical example of hystero-epilepsy. The attack commenced with pallor, then she fell, and twisting round and round on the straw, tore to pieces whatever came into her hands. In a few minutes it was all over and she was well again.

The origin of this outbreak is curious. A band of about seventy girls engaged themselves to an old woman to work for her in the rice fields. Afterwards, thinking that they could make a better bargain, they broke their engagement and worked for some one else. The old woman whose indignation they had aroused was in this superstitious country generally supposed to possess the power of witchcraft, and the girls continued daily in dread of being bewitched. This, acting on a constitution enfeebled by eleven hours' work a day, standing in water, under a hot sun, with food consisting chiefly of unsaleable beans, some bad bacon, and decaying rice, soon led to a state of very unstable mental equilibrium, which was completely upset by seeing the hystero-epileptic attacks of the first patient. By sending them off to their own homes and isolating them they were all speedily cured. H. Handford, M.D.

Article 936.

STANMORE BISHOP ON THE MEDIO-TARSAL JOINT FROM AN ORTHOPÆDIC POINT OF VIEW.*

There are only two joints of the foot which require much consideration. These are the ankle joint proper and the mediotarsal joint. As regards the latter, surgical and, to a certain extent, anatomical writers favour the view of the mediotarsal joint as being composed of one joint with part of another—viz., the calcaneo-cuboid joint with the anterior portion of the astragalo-calcaneo-scaphoid, and consider it an arthrodial joint, passing right across the foot, the movements of one part—the astragalo-scaphoid—being 'somewhat freer' than in the other—the calcaneo-cuboid—but with no other difference.

Surgical orthopædists have reduced this theory to practice.

Mr. Bishop advances another view, that which has already been urged (anatomically) by Mr. Hancock.

He considers that the mediotarsal joint 'is not composed of two joints, but is one alone. It is not an arthrodial or gliding joint, but a modification of an enarthrodial, or ball-and-socket. It does not pass entirely across the foot, but only partly. It is not a transverse joint, the axis of its greatest diameter being antero-posterior. In short, the calcaneo-cuboid joint has nothing whatever to do with it, being merely a 'secondary' joint, distinct in every way from the 'primary' mediotarsal, except in the fact that it is *nearly* in the plane of part of it. It is not, however, confined to the articular surfaces of the astragalus and scaphoid, the scaphoid bone being only a bony plate developed in one part of the capsule, but includes also the anterior articular surfaces of the astragalus and calcaneum, the calcaneo-scaphoid ligaments, inferior internal, and superior. It is a segment of a true ball-and-socket joint, partially modified by pressure, of which the talar head is the ball and the rest of the tarsus, os calcis, scaphoid, cuboid, and cuneiform, the socket,

* 'The Mediotarsal Joint from an Orthopædic Point of View.' By E. Stanmore Bishop, F.R.C.S., *Medical Chronicle*, October 1888.

so far as the movements now considered, are concerned.'

The author illustrates this view in various ways, referring both to anatomical and pathological conditions of the parts. The arrangement of the synovial membranes and the disposition of the ligaments and the attachment of the muscles all point to this deduction. The astragalus is the only bone to which no muscle is attached. Rotation of the foot and other movements take place round the central axis of the joint as described. He further draws a distinction between talipes valgus and flat-floot, the former being a rotation downwards and outwards of the socket upon the ball, as talipes varus is a rotation upwards and inwards, whilst flat-foot is not a talipes at all, but a sub-dislocation of the joint itself.

Mr. Bishop proposes to draw deductions as to a plan of treatment, based upon these principles, in a subsequent paper. NOBLE SMITH.

ARTICLE 937.

BOZEMAN ON THE SURGICAL TREATMENT OF PYELITIS AND URETERITIS IN WOMEN.*

DR. BOZEMAN has carefully investigated the more distressing and dangerous symptoms which accompany large urinary fistulæ in women. He objects to desperate operations, such as plastic occlusion of the vagina or *os uteri*, or incarceration of the cervix in the bladder or rectum. To reach the fistula thoroughly he practises dilatation of the vagina. To overcome the evils due to the contact of urine with the vagina and vulva he has contrived a 'drainage-support,' which can be accurately adjusted to the vagina, so that all the fluid which escapes from the fistula may flow away without touching the guarded parts. After these precautions there remained the irritation of the edges of the fistula before and after operation, by morbid urine. This serious complication he overcomes by catheterisation of the ureter and irrigation of the kidney itself. In one case, where pyelitis existed, this systematic irrigation cured the renal complication after many months of treatment; even the fistula was closed. Encouraged by his success, Dr. Bozeman undertook the cure of a case of pyelitis of the right kidney, where no fistula existed. He cut through the vagina one inch and a quarter below the cervix, and three quarters of an inch to the right of the median line, and a circular piece of the septum was removed, forming an opening in the bladder sufficiently large to admit the index-finger. The orifice of the ureter was discovered, and the vesical and vaginal mucous membranes united around the border of the opening. A No. 8 French olive-tipped catheter was then passed into the ureter and entered the pelvis of the kidney without meeting any obstruction. Warm water was injected through the catheter, a drachm being injected into the renal pelvis at a time and then allowed to escape. The irrigation was continued until the fluid which came away was free from blood. The drainage-support was introduced the next day and retained throughout the treatment, a modified form being used when the patient was able to get up. By the tenth day the edges of the artificial fistula had healed. Every day afterwards, for several weeks, a flexible olive-tipped catheter was passed into the ureter, and the pelvis of the kidney was irrigated with a warm 1 in 20,000 solution of perchloride of mercury. By the patient's feelings the operator could tell when the renal pelvis was distended. At length the urine became healthy, and a few months later, the drainage-support being retained, the patient returned to hospital for closure of the fistula. A catheter was passed into the ureter; it was too large, as the ureter had contracted since the last occasion on which it had been passed up that duct. Ureteritis and pyelitis followed, and was cured by irrigation; at length the fistula was closed. Dr. Bozeman has since extended the treatment to cases of chronic inflammation of the urinary tract, where the morbid process had not extended as high as the kidney. He diagnoses ureteritis by a certain train of symptoms, resembling renal colic, which he terms 'renal tenesmus.' He also explores the ureter itself, which, when inflamed, can be felt as a hard, tender cord on vaginal examination. By the same operation ('colpo-uretero-cystotomy') as that which he performs for pyelitis, and by similar after-treatment, he allows the diseased ureteric membrane prolonged rest, and ultimately cures the chronic inflammation. A multitude of necessary precautions are noted in Dr. Bozeman's papers on the above subjects. He believes that his operation will, in many cases, supplant nephrectomy and nephrotomy. ALBAN DORAN.

* 'The Gradual Preparatory Treatment of the Complications of Urinary and Fæcal Fistulæ in Women, including a Special Consideration of the Treatment of Pyelitis by a New Method, and the Prevention of the Evils of the Incontinency of Urine by a New System of Drainage.' *Trans. Ninth Internat. Med. Congress*, vol. ii. 'Chronic Pyelitis successfully treated by Kolpo-uretero-cystotomy.' *American Jour. Med. Science*, March and April 1888. 'Renal Tenesmus,' *Med. Record* (New York), Aug. 4, 1888.

SURGERY.

RECENT PAPERS.

938. NEGRETTO.—On Two Cases of Tetanus Successfully Treated by the Application of the Actual Cautery to the Region of the Spine. (*Gazz. degli Ospitali*, September 1888.)

939. LORETA, PROFESSOR.—Chronic Vomiting relieved by Abdominal Section and the Breaking Down of Adhesions of the Pyloric End of the Stomach and of the Duodenum. (*Gazz. degli Ospitali*, September 1888.)

940. SVÏIAJENINOFF, DR. G. A.—Case of Punctured and Incised Wound of the Abdomen, with Prolapsus of the Small Bowel, Sigmoid Curvature, and Omentum, and with Incised Wounds of the Small Bowel and Spermatic Cord. (*Vratch*, No. 23, 1888, p. 455.)

941. PÜTOKHIN, DR. IVAN A.—On Suprapubic Lithotomy. (*Proceedings of the Kaluga Medical Society for* 1887, Part II., 1888, p. 7.)

942. MATLAKOWSKI, DR.—Two Cases of Puerperal Purulent Peritonitis Treated by Abdominal Section. (*Gazeta Lekarska*, No. 20, 1888, p. 320.)

943. BARACZ, DR.—Note on Local Anæsthesia by Means of Cocaine. (*Medycyna*, Nos. 18 and 19, 1888.)

944. JANISZEWSKI, DR.—Resection of Thirty-two Centimètres of the Small Bowel, Ending in Recovery. (*Medycyna*, No. 20, 1888.)

945. SAYRE.—The Advantages of Plaster-of-Paris Dressings as a Means of Spinal Support. (*Provincial Med. Jour.*, August 1888.)

946. RICHARDSON.—On Tapping for Ascites. (*Asclepiad*, August 1888.)

947. JOHNSON, DR. F.—Operation for Ingrowing Toe-nail, with Hypodermatic Injection of Cocaine, followed by Collapse and Gangrene. (*Med. Progress*, September 1888.)

Art. 938. *Negretto on Two Cases of Tetanus Successfully Treated by the Application of the Actual Cautery to the Region of the Spine.*—The first case relates to a robust young peasant, aged 19, who crushed the nail of the little finger on Oct. 19, 1884. Sixteen days later the first symptoms appeared in the shape of stiffness of the jaws and of the neck. Nevertheless, he continued to work for four days longer, when he was admitted into the hospital with well-marked tetanus. For eighteen days he was treated vigorously with large doses of chloral, and morphia, and occasional warm baths, but without any appreciable improvement. At this time all medicines were omitted, and Paquelin's cautery was applied, at a red heat, on each side the spinous processes from the eleventh dorsal vertebra down to the lower end of the sacrum, causing a deep eschar, which was treated antiseptically. Two days later the patient had improved considerably, and notwithstanding the wounds, which did not cause so much pain as was expected, he was able to lie on his back. By the sixth day after the application of the cautery he was convalescent, and all trace of tetanus had disappeared, with the exception of some tension of the abdominal muscles, which continued for two more days. At the end of five weeks after the cauterisation he left the hospital quite well and with the wounds healed. The second case relates to a man, aged 34, who, during a drunken row, was knocked on to a heap of stones and had his upper lip bruised, but when brought to the hospital no trace of a wound could be discovered. The man himself, too, was not aware of there having been any wound. The first symptoms appeared two days after the accident, and he was received into the hospital on the fifth day. The case was a well-marked one, and of some severity. It was treated like the first with large doses of chloral and morphia. The warm baths were tried, but instead of producing sleep and rest, as in the first case, they aggravated the convulsive attacks and were, therefore, not persisted in. This treatment was continued for thirteen days, from Oct. 22, 1887, to Nov. 4; when, no improvement being visible, the cautery was applied as before on each side the spine from the fifth dorsal vertebra to the lower end of the sacrum. The wounds were treated antiseptically and all internal remedies were stopped. Next day there was a very sensible improvement and the patient only had two attacks in the twenty-four hours. By the eighth day he was well and the wounds were nearly healed. The author, in discussing the etiology of the disease, expresses his belief in its infective nature, and believes it to be due to an organic poison, probably a bacillus. Consequently, he does not accept the existence of spontaneous or idiopathic tetanus any more than idiopathic erysipelas, but he believes that in all cases a wound will be found if searched for with sufficient care. The incubation period of sixteen days in the first case and of only two days in the other is curious, but the author does not suggest any explanation. Finally, he expresses the opinion that the treatment by the actual cautery is more suited to chronic cases than to the very acute ones.

939. *Loreta on Chronic Vomiting relieved by Abdominal Section and the Breaking Down of Adhesions of the Pyloric End of the Stomach and of the Duodenum.*—The subject of this operation was a young woman of 22 years of age. She had a very strong family history of phthisis, and had suffered from enteric fever at the age of 16. The gastric disturbances commenced five years ago, that is, about a year after the fever. At first they were limited to a sense of fulness and some pain at the epigastrium after meals, followed by eructation, and occasionally (every three or four days) by vomiting. She gradually became worse. The pain was continuous, and chiefly in the region of the pylorus. Vomiting took place about half an hour or an hour after every meal. The vomited matter was partially digested food, and presented no peculiarity. There was never any admixture with blood. On examination of the epigastrium succussion could readily be obtained, and there was some increased resistance in the region of the pylorus. Frerich's effervescing mixture was given, and the stomach, becoming distended with gas, was easily mapped out. The cardiac end and the greater curvature were readily distinguished, but the pyloric end could not be clearly defined. It was evident that there was no considerable dilatation. The vomiting was unchecked by medicines, nor was it in any way influenced by dieting. It was decided that carcinoma, gastric ulcer, chronic gastritis, and nervous vomiting could be excluded, and that the diagnosis lay between stenosis of the pylorus and adhesion of the stomach to the surrounding viscera preventing the free peristaltic movements, and so interfering with the pressure that is normally put on the contents of the stomach to force them through the pylorus. It was felt that either of these conditions could only be relieved by an operation, which was, consequently, performed under chloroform. An incision, 5 inches long, was made from an inch below the ensiform cartilage downwards, and to the right. The liver presented itself in the wound, and when it was pushed upwards out of the way an attempt was made to bring the stomach into the opening. This was found at first to be impossible, on account of extensive adhesions. After much trouble some of these were broken down, a small opening was made into the stomach, and a No. 8 catheter passed through the pylorus. Using the catheter as a guide, the finger was subsequently passed through the pylorus, which was found to be quite free. The remaining adhesions of the stomach and of the duodenum were now torn through, the opening in the stomach stitched up by continuous suture, and the abdominal wound closed. There had been very free venous hæmorrhage from the torn adhesions, but this was disregarded, the blood being allowed to remain in the peritoneal cavity, and no special means being used to check the hæmorrhage. The reason for this unwonted procedure is explained in the following theory put forward by Professor Loreta, but which will not, I think, gain general acceptance. Hæmorrhage from the liver, or venous hæmorrhage generally within the abdomen, is not fatal either by the quantity of blood poured out, or by the influence which the latter exercises on the peritoneum, which actively absorbs the blood and restores it to the circulation. Notwithstanding this theory, the patient was very collapsed after the operation, and was only revived by the subcutaneous injection of ether and the application of warmth to the extremities. She recovered from the operation, but, some months later, all the old symptoms and the vomiting returned. Of course, it is possible the adhesions had reformed. H. Handford, M.D.

940. *Sviïajeninoff on Case of Stab-wound of the Abdomen, with Prolapsus of Viscera and Injury to the Small Bowel and Spermatic Cord.*—At a recent

meeting of the Russian Pirogovian Surgical Society, Dr. G. A. Svïiajeninoff, of St. Petersburg, read (*Vratch*, No. 23, 1888, p. 455) the case of a floor-rubber, aged 29, who had been admitted to the Mariïnsky Hospital in a collapsed state about an hour after his having been stabbed with a cobbler's knife. Having removed a bundle of dirty towels, the author found that the whole left side of the abdomen and a part of the right one were covered with numerous coils of the small bowel, sigmoid curvature, and omentum, some loops even hanging down between the man's thighs. They were protruding from a clean-cut wound, four inches long, situated just above the left femoral arch, and involving the external inguinal ring with the sheath and blood-vessels of the spermatic cord. The prolapsed bowels were moderately distended and considerably injected. One of the coils, one foot long, presented six incised wounds, measuring from 1 to 2½ centimètres in length, of which one was superficial, but the other five perforating, with everted lips. Having stitched the intestinal wounds with twenty-five Lembert's silk sutures, Dr. Svïiajeninoff applied two ligatures on the spermatic blood-vessels, and closed the abdominal wound with seven deep and numerous superficial sutures. A thin drainage-tube was inserted into the lower angle of the wound, and the latter was powdered with iodoform and covered with an antiseptic dressing. The operation, which was conducted under chloroform and a 3 per cent. boracic spray, lasted two hours. The patient was rather collapsed, but under the influence of a hypodermic injection of musk recovered his senses in 1½ hours. For the first three days there were observed marked peritonitic symptoms, but subsequently his state gradually, though slowly, improved, and a couple of months later he was discharged quite well. [Similar cases of severe traumatic injuries to the abdomen, ending in recovery, have been recently published by Drs. Gratch, Indütnyi (*vide* the LONDON MEDICAL RECORDER, July 1888, p. 282), Benisovitch, Goshkevitch, Gedevanoff, Ternovsky, Alexëëff, Teziakoff, Beklemisheff (three), and Kolpin (*vide* the *Annals of Surgery*, August 1888, p. 147).—*Rep.*]

941. *Pütokhin on Suprapubic Lithotomy.*—Dr. Ivan A. Pütokhin, of Mosalsk, details (*Proceedings of the Kaluga Medical Society for* 1887, Part II., 1888, p. 7) his third successful case of high section, referring to a sickly peasant boy of 7, with vesical symptoms of four years' standing. The operation was performed under chloroform and strictest antiseptic precautions. The bladder was distended with 100 cubic centimètres of a warm one per cent. carbolic solution, the rectum by means of a colpeurynter with 300 cubic centimètres water. The abdominal incision measured seven centimètres, beginning just above the pubes. An oval, smooth, very hard stone, composed of urates and having a clayey colour, was removed; it weighed 34·25 grammes, and measured 5·3 × 3·8 × 2·6 centimètres. After its extraction a thick India-rubber drainage-tube was introduced into the viscus to wash out the latter with a 0·1 per cent. solution of corrosive sublimate daily. The abdominal wound was left open and dressed with sublimatised gauze and hygroscopic cotton-wool, the dressing being changed at first every hour, later on less frequently. No catheter was used. The drainage was removed on the fifth day. On the 23rd the boy was discharged with a firmly cicatrised wound, his general state having been excellent, the temperature quite normal, all through. [Dr. Pütokhin's first case may be found in the *Meditzinskoie Obozrenië*, No. 17, 1886, p. 423. It is that of a peasant boy of 4, in whom no rectal bag was employed, the bladder alone being distended with 90 cubic centimètres of the carbolic solution. The abdominal wound was 2½ centimètres long. The stone, removed with bone forceps, was a phosphate concretion with a urate nucleus, weighing four grammes, and measuring 2·4 × 2 × 1·1 centimètres. The wounds were left unsutured; neither drainage nor catheter were used, the bladder having been washed out (with the sublimate lotion) only once, just after the extraction. The boy was kept always on his side, with flexed lower limbs, the antiseptic dressing being changed every half-hour. From the thirteenth day all his urine passed through the urethra. The (evening) temperature rose to 39°·2 C. on the second, and to 38° C. on the third day, to remain normal afterwards, any complications being absent. On the thirty-fifth day the patient left well. In the *Meditzinskoïe Obozrenië*, No. 1, 1887, p. 38, Dr. Pütokhin describes his second case, referring to a highly anæmic and exhausted peasant boy of 8, with vesical symptoms of four years' duration, a severe chronic cystitis, turbid and strongly alkaline urine, prolapsus recti, and umbilical hernia. After a four weeks' preparatory treatment for improving the boy's general state, the operation was performed, the bladder alone being distended (with 150 cubic centimètres of the carbolic water). The abdominal incision measured five centimètres, the vesical three centimètres. The stone, extracted with bone forceps, proved to be an oxalate one, 17·8 grammes in weight, its dimensions being 3·5, 2·7, and 1·5 centimètres. A caoutchouc drainage-tube was inserted into the bladder, but no sutures were applied, the abdominal wound being simply dressed with sublimate compresses and cotton-wool, sprinkled with naphthaline. For the first two days the dressing was changed hourly, and the viscus washed out with the sublimate solution through the drainage-tube thrice daily, but on the third day the tube fell out and could not be re-inserted. For the first ten days the temperature oscillated about 38°·0 to 38°·7 C. on evenings, to become normal subsequently. On the eleventh day the urine issued from the urethra for the first time, to pass all normally from the eighteenth day. Except a slight and brief decubitus (about two weeks after the operation), no complications whatever occurred. On the thirty-seventh day the boy was discharged in a strikingly improved condition, without anything abnormal about his urinary organs.] Analysing his instructive cases, the writer emphasises that, 'in spite of his somewhat primitive after-treatment,' the aftercourse was admiringly free from any much-dreaded complications (such as peritoneal inflammation, urinary infiltration, &c.), and that even in the boy with a highly decomposed urine. The excellent results obtained are ascribed by him mainly to a strict antiseptic management of the cases, including such measures as the internal administration of salicylate of soda, or boracic acid, or extract of stigmata maidis (one grain, eight or ten times daily), in the first two of his cases. Of course Dr. Pütokhin thinks and speaks highly of suprapubic section as a method of treatment of lithiasis.

942. *Matlakowski on Two Cases of Laparotomy in Puerperal Suppurative Peritonitis.*—In the Polish

weekly *Gazeta Lekarska*, No. 20, 1888, p. 320), Dr. Matlakowski, of Warsaw, relates two remarkable cases of suppurative peritonitis, treated by him with laparotomy. The first is that of a woman, aged 32, in whom, about five weeks after an abortion in the fourth month of pregnancy there appeared violent rigor and high fever, with a gradual enlargement of the abdomen. When she sought Dr. Matlakowski's advice, about three weeks since the first symptoms, her abdomen measured 93 centimètres in the circumference across the navel, while there were present all signs of a circumscribed purulent peritonitis. Laparotomy was resorted to without any further delay. The abdomen having been opened by a median incision below the navel, an enormous mass of pus welled out of a cavity, the lower wall of which was the pelvic peritoneum, while the posterior and upper walls consisted of intestinal coils glued together, the transverse colon being adherent to the anterior abdominal wall at the upper border, several fingers' breadth above the navel. Having washed out the cavity with a boracic and a sublimate corrosive (1 to 2,000) solution, the writer closed the upper part of the wound with sutures, and in the remaining portion inserted several iodoform plugs. At first the woman's state commenced to improve, the temperature returning to the standard, but, later on, there supervened an increasing prostration, with anorexia, ending in death three weeks after the operation. The other patient, aged 37, was admitted a week after a miscarriage, which had been immediately followed by a high fever, the placenta having been removed by a midwife's hands. On admission, the abdomen was found to be distended, globular, and fluctuating over an extensive area, the temperature oscillating between 38° and 39° C. On opening the abdomen along the linea alba, much highly offensive gas and 2,500 cubic centimètres of pus escaped. The purulent cavity occupied more than a half of the whole abdomen. After having washed out the peritoneum with a thymol (1 in 1,000) solution, then with a sublimate (1 in 5,000), and, finally, with a saline one, Dr. Matlakowski treated the abdominal wound as in the former case. In view of an offensive odour of the discharge, the cavity was repeatedly washed out with a thymol (1 to 2,000) lotion, fresh iodoform plugs being inserted on each occasion. A month after the operation the woman was discharged in good health.

943. *Baracz on Cocaine as a Local Anæsthetic in Surgical Practice.*—In the Polish periodical *Medycyna*, Nos. 18 and 19, 1888, Dr. Baracz describes twenty cases of minor operations on healthy or inflamed skin where he resorted to the hypodermic injection of a 2-per cent. solution of cocaine, the amount of the pure alkaloid in individual cases varying from 0·02 to 0·15 gramme. In all cases but one (a periproctitic abscess near the anus) complete anæsthesia was obtained. In two of the nineteen cases the edges of the wound quite unexpectedly sloughed away. In cases of staphylorraphy and excision of hæmorrhoids, complete anæsthesia was induced by repeatedly painting the parts, both before and during the operation, with a 10 per cent. solution of the drug, the quantity used in individual cases being always about 0·25 gramme. In four cases toxic symptoms were observed, which in two consisted in fainting, with collapsed pulse, and in one in general excitement; while in the remaining patient, an epileptic woman, clonic convulsions supervened, the symptoms entirely disappearing in ten or fifteen minutes after the internal use of wine or inhalation of amyl-nitrite. Dr. Baracz asserts that toxic symptoms may occur even after the injection of relatively small doses (0·1) of the drug, and that in nervous persons the alkaloid must be used with the utmost caution. Of unpleasant accessory effects, he mentions further the possibility of a consecutive local sloughing, which he attributes to the powerful vaso-constricting action of cocaine. On the other hand, however, that property of the drug ensures a smaller loss of blood during the operation, and prevents any secondary hæmorrhage.

944. *Janiszewski on a Case of Resection of Small Bowel.*—In the Polish weekly *Medycyna*, No. 20, 1888, Dr. Janiszewski publishes the case of a peasant woman of 58, with a femoral hernia of twenty-seven years' standing, which suddenly became strangulated. On the sixth day grave collapse supervened, and herniotomy was at last performed. On opening the hernial sac the writer found that the incarcerated coil had already undergone mortification. The gangrenous piece of the small bowel, measuring 32 centimètres, was excised, after which the intestinal wound was closed by a double intestinal suture, the hernial sac incised with a herniotome, the restored intestinal tube returned into the abdominal cavity, and the angles of the wound closed with several stitches, while its middle was left open. The operation had been repeatedly interrupted, on account of extreme collapse. The after-course, however, left nothing to be desired, there being no fever, and the woman's general state being very good. [The communication was made on the ninth day after the operation.]

V. Idelson, M.D.

945. *Richardson on Tapping for Ascites.*—In the *Asclepiad*, August 1888, p. 236, Dr. Richardson describes a little plan he has been in the habit of practising for a long time to prevent the entrance of air when tapping for ascites. The author slips over the proximal end of the cannula a piece of India-rubber tubing, and, turning the surface of the tubing over the end, makes a flat surface of rubber. The trocar is then pushed through the rubber, and made to go right home. On withdrawing the trocar the opening through the soft rubber closes of itself, and the escaping fluid runs readily through the length of tube into the utensil ready to receive it. A small trocar is infinitely to be preferred to a large one, so that the fluid may come away slowly; then there is no danger of the patient suffering from syncope, as is often the case if a large instrument be used and the fluid drawn off rapidly. Dr. Richardson always uses the ether spray for benumbing the skin at the point of puncture; in freezing with the spray it is well to freeze over a space about an inch in diameter, and when this is well frozen, put the warm finger over the centre to soften the skin at the point of puncture.

946. *Sayre on the Advantages of Plaster-of-Paris Dressings as a Means of Spinal Support.*—In the *Provincial Med. Jour.*, August 1888, Dr. Sayre, of New York, gives an account of the way in which he first applied plaster-of-Paris jackets in cases of spinal disease, and states that these jackets in cases of rotary lateral curvature, and with the jury-mast in cases of Pott's disease, are altogether superior to any other instrument yet devised, for the following reasons:—They can be applied in any place by any competent surgeon without the aid of an instrument-maker. They can be worn with perfect ease and

comfort to the patient. The plaster-of-Paris jacket and jury-mast retains the spinal column in a more quiescent condition and relieves the inflamed parts from the pressure of the head and shoulders in cases of spondylitis better than any other device hitherto employed. Being applied while the hands are over the head and the body partially suspended, the thoracic cavity is expanded to its utmost capacity, thereby increasing the ability for inspiration better than can be done when instruments are retained by fixed bands round the thorax. These jackets are porous and permeable to the air, a condition not obtained by using felt, leather, &c. They can be applied with even pressure over all the irregularities of the body, and keep the parts in perfect position if put on properly. RICHARD NEALE, M.D.

947. *Johnson on Operation for Ingrowing Toe-Nail with Hypodermic Injection of Cocaine followed by Collapse and Gangrene.*—The patient was a young woman with an ingrowing toenail, preparatory to operating on which, half a grain of muriate of cocaine was injected into the soft part on the inner side of the great toe. After waiting two minutes, the operation was proceeded with, and the wound dressed. From the time of the injection of cocaine till the completion of the operation was thirty-five minutes, and during that time she complained of no pain at all. Just as the doctor was preparing to leave, he noticed that she was in a state of collapse, pulseless, lips cyanosed, and heart beating feebly and irregularly. He administered about a drachm of sulphuric ether hypodermically, and two drops of nitrite of amyl internally, which gave immediate relief. He visited the patient on the following morning and found her resting well, complaining but little. On taking off the dressing to put on a new one, he was surprised to find the flesh on the inner side of the toe was black, cold, and bloodless, with a mummified look. The stitches were all taken out, and the wound treated as gangrenous, and in two weeks' time her toe was well, and she was able to walk without further pain.

ALFRED S. GUBB.

MEDICINE.

RECENT PAPERS.

948. FISCHER, DR. HARRIS.—On Treatment of Pneumonia. (*New York Med. Record*, No. 4, vol. xxxiv.)

949. SÉZARY AND AUNE, DRS.—On Treatment of Diarrhœa in Tuberculous Subjects with Lactic Acid. (*Lyon Médical*, No. 35.)

950. WEINBERG, DR. WILHELM.—On Tubercular Pericarditis. (*Munch. med. Wochensch.*, Nos. 46 and 47, 1887.)

951. MAYS, DR. THOMAS.—On Antipyrin, Antifebrin, and Phenacetin in the Treatment of Pulmonary Consumption. (*Med. and Surg. Reporter*, vol. 59, No. 6.)

952. BREMNER, A. T.—On Treatment of Phthisis by Gaseous Enemata. (*Birmingham Med. Review*, May 1888.)

953. ROBERTSON, DR. G. J.—On Treatment of Empyema by Subcutaneous Drainage and Irrigation. (*The Medical Chronicle*, vol. viii., Nos. 2, 3, and 4.)

954. VAN BIBBER, DR. W. C.—On the Mechanism of Pneumonia and its Treatment. (*Journal of the American Medical Association*, vol. ii., No. 4.)

955. HÉRARD, JARJAVAY, AND GOETZ.—On the Action of Hydrofluoric Acid in the Treatment of Pulmonary Phthisis. (*Bull. de l'Acad. de Médecine*, No. 47, 1887; *Bull. Gén. de Thérap.*, March 1888; *Revue Méd. de la Suisse Rom.*, No. 8, 1888.)

956. GUTTMANN, DR. PAUL.—On the Treatment of Phthisis by Creasote. (*Zeitschrift für klin. Med.*, Band xiii. Heft 5.)

957. RENZI, DE.—On Ascites from a Varicose Condition of the Peritoneal Veins. (*Gazz. degli Ospitali*, July 1888.)

958. PERRONCITO AND AIROLDI.—A Case of Tænia Medio-canellata and of numerous Tænia Nana in a Child of Six Years. (*Gazz. degli Ospitali*, August 1888.)

959. RICHARDSON.—The Cure and Prevention of Languor. (*Asclepiad*, August 1888.)

960. COE.—On Albuminuria in Diabetes Mellitus. (*New York Med. Jour.*, July 1888.)

961. GRINEVITSKI.—On Osmic Acid Injections in Muscular Rheumatism. (*Practitioner*, September 1888.)

962. SIMON.—On a Case of General Tuberculosis and Tumour in the Cerebellum. (*Birmingham Med. Rev.*, October 1888.)

963. FYCHOWSKI, DR. I.—Treatment of Certain Complications of Enteric Fever. (*Gazeta Lekarska*, No. 28, 1888.)

964. JÓSEFOWICZ, DR.—On Albuminuria from Salol. (*Gazeta Lekarska*, No. 23, 1887.)

ART. 948. *Fischer on Treatment of Pneumonia.*—Dr. Harris Fischer (the *Medical Record*, New York, No. 4, vol. xxxiv.) presents a synopsis of the treatment of twenty-six consecutive cases of pneumonia, only two of which failed to recover under the somewhat active treatment adopted. Poultices, and sometimes dry cupping locally, free administration of stimulants, and especially carbonate of ammonia and whisky, occasional doses of antipyrin and opiates, and, in many of the cases where no direct history of chill was obtained and where malarial influences were suspected, large doses of quinine frequently repeated. The two fatal cases occurred in patients who were exhausted by previous alcoholism and uterine hæmorrhage respectively.

949. *Sézary and Aune on Treatment of Diarrhœa in Tuberculous Subjects with Lactic Acid.*—Drs. Sézary and Aune (Algiers) contribute some observations on this method of treatment (*Lyon Médical*, No. 35, 1888), by which they are led to believe that in lactic acid is to be found the specific against tubercular disease. Encouraged by the success obtained by laryngologists in the treatment of tubercular disease of the larynx and tongue by long-continued application of lactic acid, the authors made use of the drug in a series of cases of diarrhœa with phthisis of the lungs of various degrees, in many of which there seems to have been every reason to believe that actual tubercular lesions of the intestine were present. The results proved most satisfactory. In many of the cases the natural state of the stools returned after a few days of the treatment. When large doses were used the patients complained that their teeth were 'set on edge,' and of some gastric uneasiness, but otherwise no ill effects were observed. The note does not state what effect, if any, was produced upon the course of the disease in the lung, but it is noted that the freedom from diarrhœa persisted after the discontinuance of the lactic acid.

950. *Weinberg on Tubercular Pericarditis.*—Dr. Wilhelm Weinberg records two cases of tubercular pericarditis with adhesion of the pericardium and ascites (*Munch. med. Wochensch.*, Nos. 46 and 47, 1887), both arising by extension of disease from the tissues in close relation with them. These cases

give support to Weigert's views on this subject—namely, that the disease as a primary affection is practically never met with, but is always secondary to similar affections of the bronchial or tracheal glands, or the pleura, by actual rupture of the diseased tissues, and the escape of tuberculous material into the pericardial cavity. In the first of the cases related the lungs themselves were entirely free from tubercle, and in the second only very slight traces could be found, the disease being chiefly confined to the pleura in the immediate neighbourhood of the pericardium. In both cases the pleura contained a large quantity of fluid, and to this the author of the note attributes the general congestion of the lower limbs and abdomen, as a direct result of pressure upon the ascending *vena cava*.

951. *Mays on Antipyrin, Antifebrin, and Phenacetin in the Treatment of Pulmonary Consumption.*—Dr. Thomas J. Mays, Philadelphia, publishes a note (*Med. and Surg. Reporter*, vol. 59, No. 6) on the action of these drugs upon the course of phthisis, laying especial stress upon the fact that it is not only upon the temperature that their good effects are to be observed, but that many of the other acute symptoms are apt to yield quite as readily to them, and hence he advises the continuance of the antipyretics for some time after the temperature has been reduced to the normal level. He finds but little distinction to be made between the drugs, but as each is apt to produce special symptoms of its own, he advises the occasional interchange of the one for the other. Large doses are advised in all cases of fever in chronic phthisis. Eight to ten grains of antifebrin or phenacetin and twelve to fifteen of antipyrin, administered every four hours may be taken as commencing doses, but will generally have to be largely increased. Several illustrative cases are related, one of which was treated with as much as seventy grains of antipyrin in the day with marked success. Without claiming any specific action for these drugs, Dr. Mays believes that they are valuable aids in the treatment of the chronic cases with acute attacks, as they tend to cut short the force of the latter and so give time for the steady application of the remedies which promote general nutrition.

952. *Bremner on Treatment of Phthisis by Gaseous Enemata.*—A. T. Bremner records a series of cases of phthisis (*Birmingham Med. Review*, May 1888) treated by gaseous enemata, in private practice. The apparatus employed for the generation of sulphuretted hydrogen was a short-necked bottle with a rubber cork perforated for two tubes, the one conveying sulphuric acid to the sulphide of iron which was placed in the bottle, and the other carrying the gas thus generated to a wash bottle. Carbonic acid was produced in a similar bottle by the action of tartaric acid upon bicarbonate of soda in the presence of water, and the gas caused to pass through another bottle containing the sulphuretted hydrogen water, whereby a mixture of the gases was obtained, which was collected in an India-rubber bag. From this bag the injections were made directly by simply attaching the enema tube. Three cases are related, two of the patients being 17 years of age and the other 30, with unmistakable signs and symptoms of commencing phthisis. In each case a marked degree of relief was obtained, but the treatment was kept up without intermission for many weeks, and the other conditions of the cases were favourable to recovery. From three to five pints of gas were, as a rule, injected twice a day, and, after the first few times, the treatment gave rise to hardly any discomfort. Some improvement was noticed in all the symptoms, and the progress of the disease appeared to be for the time, at least, suspended.

953. *Robertson on Treatment of Empyema by Subcutaneous Drainage and Irrigation.*—Dr. G. J. Robertson, M.B., C.M. (*The Medical Chronicle*, vol. viii., Nos. 2, 3, and 4), gives an account of a method of subcutaneous drainage and irrigation practised by him in cases of empyema. He employs India-rubber drainage-tubes, interrupted by glass elbow-pieces at the point of entry through the intercostal space, thus preventing the tube from becoming constricted as the external wound cicatrises. Two tubes are inserted in adjoining spaces, the upper one being reserved for irrigation, and the lower, of sufficient length to reach to the floor of the cavity, being employed for drainage. These tubes are secured to the chest wall when once placed in position, and may be left untouched until drainage is complete, unless interfered with by such blocking as cannot be overcome without their withdrawal. Antiseptic fluid may be injected through the upper tube and the cavity washed out from time to time if the case requires it. The external end of the drainage-tube is made to dip under the surface of an antiseptic fluid and its course is interrupted by a U-shaped glass bend, through which the steady flow of the fluid or any oscillations or stoppages can be observed at once. The advantages claimed, at considerable length, for the method are chiefly the greater control over the progress of the drainage, the greater assistance given to the desired expansion of the lung, by the gradual, instead of the rapid, emptying of the cavity, and the greater facility for keeping the whole cavity antiseptic. The oscillations of the fluid in the U-shaped tubes are made the subject of much speculation, and their various departures from the normal standard are explained as indicating to some extent the progress of the expanding lung. The well-known arguments in favour of a second opening into the chest when simple syphon action is employed in both directions, are reproduced with considerable force. A series of cases is appended in which the writer has employed his method with varying success.

954. *Van Bibber on the Mechanism of Pneumonia and its Treatment.*—Dr. W. C. Van Bibber, Baltimore, discusses this subject (*Journal of the American Medical Association*, vol. ii., No. 4), and speculates at considerable length as to the influence of cold, malaria, old age, and alcohol respectively upon the predisposition to the disease or its actual causation. With regard to the influence of micro-organisms he quotes the opinions of Dr. Welch, of Baltimore, who points out that two forms, discovered respectively by Friedländer and Sternberg, have been proved experimentally to play a part in the causation of acute pneumonia. One, at least, of these forms has been identified in normal sputa, but Dr. Welch does not regard that fact as militating against his theory, believing that the bacterium is only capable of further multiplication when some of the predisposing causes referred to are at work. The subject of treatment is based upon many years' experience, and four typical cases are supposed for illustration, varying in age from the infant to the old man. In all forms Dr. Van Bibber advocates rest in bed (subject to frequent changes of position), a darkened room,

medication of the air with some antiseptic, warmth and ventilation being maintained by an open fire. A saline purge is given at the outset and repeated every few days, and more often in the older cases. Castor-oil is recommended for infants. Antifebrin is advised in graduated doses for the reduction of temperature, and for all but the cases in infancy the application to the bases of wet and dry cupping is strongly commended. This is to be repeated every three days, selecting the root of the lungs for the scarification. Alcohol is not given except in the cases of old age in which it has become a habit, but chloride or carbonate of ammonium are to be employed in all cases. Malarial manifestations are to be met by hypodermic injections of quinine. In his commentary upon the above line of treatment the author lays much stress upon the relief of mechanical congestion by wet cupping, as being the best means of taking off the strain upon the right side of the heart in which lies the especial danger to life, particularly in the older cases.

955. *Hérard, Jarjavay, and Goetz on the Action of Hydrofluoric Acid in the Treatment of Pulmonary Phthisis.*—M. Hérard, in the name of a Commission consisting of himself and Drs. Féréol and Proust, presents a report (*Bull. de l'Acad. de Méd.*, No. 47, 1887) on the subject of the treatment of phthisis by means of hydrofluoric acid. He points out that the immunity from phthisis of glass-blowers and others exposed to the vapours of the acid has been observed for a long time past, and that efforts were made even in 1862 by Bastien and afterwards by Charcot to bring the therapeutic action of the acid into practice in cases of phthisis. In 1885 Drs. Seiler and Garcin again pointed out that it possessed strong antifermentative and antiseptic powers, and more recently experiments have been made by Martin, showing that the acid, even in great dilution, is able to nullify the growth of bacilli in cultivations; while experiments on animals, by which the vapour has been introduced by inhalation, have shown that the phthisical process may thus be effectively hindered. For the treatment of human beings it is necessary that the vapour should be diffused in a more or less accurately closed chamber, and that the inhalations should be continued for an hour at a time. The best results have been obtained by this means, the appetite being very rapidly recovered, and all the other common symptoms being relieved in a large proportion of the cases. Of one hundred cases, thirty-five are stated to have been cured, forty-one improved, fourteen unaffected, and ten died. The first effects of inhalation were to produce cough, but this difficulty was, as a rule, very rapidly overcome. Dr. Charles Jarjavay (*Bull. Gén. de Thérap.*, March 1888) collates the various methods that have been recommended for the inhalation of hydrofluoric acid. In all of these the acid is of course stored and manipulated in gutta-percha vessels. Where a special inhaling chamber can be contrived, the vapour may be driven into it by means of atmospheric air forced through a mixture of the acid and water in various degrees of dilution. Simpler portable contrivances have been employed, consisting of a bottle containing the mixture of acid and water through which the air may be drawn by means of an India-rubber tube, and inhaled direct; or of a bag containing a definite quantity of air, which is connected by tubing with the acid bottle, two wash-bottles being interposed between the acid bottle and the inhaler. A definite volume of air is thus drawn through the whole apparatus until the air-bag is exhausted. The strength of the acid solution varies from 15 to 20 or 30 per cent. Dr. E. Goetz (*Revue Méd. de la Suisse Rom.*, No. 8, 1888) contributes a note on the action of hydrofluoric acid in the treatment of phthisis, in which, after full recognition of preceding work, he advocates the careful trial of the remedy as one which is, at any rate, simple and innocuous, and may greatly contribute to the recovery of early cases. He points out that in this, as in every other form of inhalant, the strength must be so graduated that long-continued inhalations can be practised without discomfort. Inhalations that are painful or in any way distressing to the patient are of very little value in practice, as they can never be long continued. Hence no positive standard can be laid down for the strength of the acid to be used in each case. The first sensations on inhaling the vapour are always somewhat irritating to the nose and fauces, but toleration is quickly established, and patients are soon able to inhale the vapour for an hour continuously. The remedy has been most successful in the early cases, and the first notable improvement is always in the appetite. Dr. Goetz notes that night sweating is diminished, but that the fever is not always reduced in proportion to the improvement in other directions, nor do the number of bacilli diminish to any material extent. The same may be said of the local physical signs. Cough is not very much affected, but the sputa, as a rule, become less profuse. Diarrhœa and laryngitis are not much affected, being generally met with in the case of advanced disease. The inhalation after the first few moments is attended with pleasant sensations, and patients always express themselves as being better for it at the time. Without predicting a great future for the treatment, Dr. Goetz claims that it may rank as a true therapeutic advance.

956. *Guttmann on the Treatment of Phthisis by Creasote.*—The antiseptic properties of creasote in the presence of the tubercle-bacillus have been further demonstrated by Dr. Paul Guttmann (*Zeitschrift für klin. Med.*, Band xiii., Heft 5), who fully confirms the observations originally put forward by Fraentzel and Sommerbrodt as to its effective action in the treatment of phthisis. The experiments made upon the bacilli in cultivation showed that a strength of 1 in 4,000 was sufficient to diminish their growth materially, whilst a strength of 1 in 2,000 completely stopped it. Hence, even if the latter result cannot be obtained, there is every reason to conclude that the continued administration of creasote in tubercular disease must have the effect of hindering the reproduction of the micro-organism. Similar testimony, obtained from the clinical aspect of the action of the drug, is borne by Dr. C. M. Hopmann (*Berlin. klin. Wochensch.*, No. 52, 1887), who has employed it steadily in cases even of advanced tubercular disease for many years. In some of the chronic cases of laryngeal tubercle it was found to have an especially soothing effect, but in intestinal tubercle and acute tuberculosis no benefit could be obtained from it. Perhaps its most important therapeutic effect was upon the gastric and intestinal digestion, either by checking the tendency to decomposition or by stimulating the glands. Following upon this an increase of weight and generally improved nutrition were added to the other changes more directly traceable to the antiseptic

action of the drug. The taste of creasote is one of its chief disadvantages. It may be given in capsules of gelatine or in pills, but no really palatable form of administration has been found as yet. Dr. Von Brunn, writing upon the same subject (*Berlin. klin. Wochensch.*, No. 8, 1888), attributes the major part of the good results obtained from creasote to its action upon the stomach and intestines. He gives it in combination with tincture of gentian, rectified spirit, and some sweet wine. In cases of diarrhœa the pill form is preferable, in combination with a little opium. He does not attribute much antipyretic power to the creasote, but advises its use both by the stomach and by inhalation in all cases where there is very profuse secretion. A series of 100 cases observed and recorded by Dr. Peter Kaazer (*Berlin. klin. Wochensch.*, No. 11, 1888) gives an opportunity of comparing the creasote treatment with other methods, and the author expresses the strongest faith in the antiseptic powers of the drug, having observed the gradual disappearance of the bacilli in at least 10 per cent. of his cases, whilst in 40 per cent. a very marked improvement could be traced. The most palatable form of administration was that ordered as above by Dr. Von Brunn, but with the substitution of an extract of coffee for the sweet wine. He advises the commencement of the treatment as soon as bacilli have been identified in the sputa, even before any physical signs may have appeared, believing that the earlier the attack is made the more effective will be its result upon the further development of the micro-organism. Less stress is laid upon the gastric improvement, and the author does not believe that any antiseptic action is exerted upon the bacillary process in the intestine. He thinks that the success or failure of creasote in any given case is in proportion to the number and activity of the bacilli already implanted in the diseased areas. Dr. Leon Rosenbusch (*Berlin. klin. Wochensch.*, No. 4, 1888) claims to have obtained good results upon the cough and expectoration, and in some cases a marked general improvement by the injection into the parenchyma of the lung, through the second intercostal space or supraspinous fossa, of a 3 per cent. solution of creasote in almond oil. The injections were made every three or four days. Preparations of creasote in capsules being somewhat expensive for hospital use, Professor Groh (*Wiener med. Blatt.*, No. 27, 1888) recommends its combination with cacao powder, by means of which as much as eight or nine drops can be given in a single dose, if carefully covered up in the preparation. As a more direct means of obtaining the same end, Dr. Sahli (*Korrespondenzbl. für Schweizer Aerzte*, No. 20, 1887) suggests the use of the pure guaiacol, which forms from 60 to 90 per cent. of beech-tar creasote. He found that many of the good results obtained by creasote were equally obtainable by guaiacol, but that a certain amount of gastro-intestinal irritation was liable to be set up by it.

E. Clifford Beale, M.B.

957. *Renzi on Ascites from a Varicose Condition of the Peritoneal Veins.*—A peasant, aged 45, suffering from the above condition, was shown by Professor De Renzi, at his Naples clinic, and formed the subject of an interesting lecture. The patient's father suffered much from varicose veins, leading eventually to œdema of both legs. The patient himself had been subject to dyspeptic symptoms from boyhood, and twelve years ago the veins of the left leg became varicose. Later, the veins of the other extremity and of the abdominal walls also became affected, and varicose ulcers appeared on both legs. The abdomen began to swell shortly before his admission into the hospital, when he was found to have a considerable amount of ascites. The superficial veins of the lower extremities and of the whole abdominal wall were extremely dilated and tortuous, and in places formed cirsoid growths. The skin and subcutaneous tissues were œdematous, and also much thickened and indurated. The liver was of the normal size, and there were no symptoms pointing specially to hepatic disease. The case, however, bore a strong general resemblance to ascites from hepatic cirrhosis, where more or less of compensation had been effected through the establishment of a collateral circulation in the abdominal parietes. But in such cases, when the direction of the flow of blood through the dilated abdominal veins is ascertained by pressure on one of them with the finger, it is found to be from above downwards; that is, from the hypochondriac and umbilical regions through the epigastric veins to the iliacs. In this case, however, and in all those where the obstruction is in the systemic veins, and not in the portal, the flow was from below upwards—that is, towards the internal mammary, thoracic, and diaphragmatic veins. There was no cardiac affection; and since, after careful examination, no other adequate cause could be discovered, Professor De Renzi suggested that the ascites was in all probability due to a varicose condition of the veins of the peritoneum. The hereditary nature of the malady and its very extensive distribution superficially in this case rendered the affection of the deeper veins extremely probable. To this cause he attributed also the persistent digestive derangements. The patient's occupation, involving long standing, favoured venous dilatation and stagnation, but the author considered the most important influence to be atavism. As regards prognosis, he considered that the man, whose ascites had already greatly diminished, would continue to improve up to a certain point, but that complete restoration was, of course, impossible. He was treated by rest, diet, and aperients; and, medicinally, by the subcutaneous injection of ergotin. Under this treatment he rapidly improved, the urine increasing in a few days from 14½ to 133 ounces. Professor De Renzi considered that the beneficial influence of the ergotin was very definite.

958. *Perroncito and Airoldi on a Case of Tænia Medio-canellata and of numerous Tænia Nana in a Child of Six Years.*—The child, when convalescent from an attack of fever two years previously, was sent into the country and fed on raw meat. In this way it was supposed to have acquired the tapeworm, for the treatment of which it was brought. A dose of ethereal extract of male fern brought away, in addition to the tænia medio-canellata, a large number—probably nearly a thousand specimens—of tænia nana. Previously to this the ova, both of the tænia medio-canellata and of tænia nana, had been found in large numbers in the fæces. About a couple of months later the child was brought again uncured. Male fern was again administered, and a tænia medio-canellata about 5 yards long brought away, together with 430 specimens of tænia nana. Tænia nana was discovered by Bilharz in Egypt, and has been described by Von Liebold. It is of very rare occurrence in Europe. It has been met

with in Belgrade by Hellich, and Spooner thinks that he has found it in America. It has also been described by Dr. Ransom (*Lancet*, 1888).

H. Handford, M.D.

959. *Richardson on the Cure and Prevention of Languor.*—In the *Asclepiad*, August 1888, p. 233, Dr. Richardson distinguishes between fits of languor and true fatigue arising from hard or prolonged physical or mental work. These fits of languor come on after repose. The affected person experiences it most on rising in the morning, and even after a good night's rest is still oppressed by a sense of weariness, and if the desire to go to sleep again be not gratified the evil is only increased. The only cure for this condition is moderate exercise, and the wearing of clothing which will give free liberation to the exhalations of the skin. Exercise must be taken regularly, and not by fits and starts; there must be no actual fatigue produced by the exercise or it will do harm, but just enough to make the patient feel glad of rest at night, and he will soon find he awakes in the morning feeling refreshed instead of weary and disinclined to go through the day's work.

960. *Coe on Albuminuria in Diabetes Mellitus.*—In the *New York Med. Jour.*, July 1888, p. 88, Dr. Coe contributes some cases of albuminuria complicating diabetes mellitus. These cases are not very common, and are only serious when the albuminuria is accompanied by other evidences of organic disease of the kidneys. A trace of albumen, appearing transiently or intermittently (when proved by exclusion to be of renal origin) and seldom or never associated with casts, may be regarded as due to irritation of the kidneys from the glycosuria. The immediate prognosis is good in these cases, but renal changes may subsequently result. The occurrence of persistent albuminuria and numerous casts in a case of diabetes of long standing is of grave import, as pointing to the existence of chronic nephritis; if acetone and diacetic acid are also present, the patient may die in coma at any time. Examination of the urine furnishes complete evidence of the patient's danger, even when the general condition is not such as to excite apprehension.

961. *Grinevitski on Osmic Acid Injections in Muscular Rheumatism.* — In the *Practitioner*, September 1888, p. 198, Dr. Maxwell contributes a translation of an article by Dr. Grinevitski, who has written his experience in the hypodermic use of osmic acid in muscular rheumatism, in which disease the author gives an injection into the parenchyma of the muscle of eight minims of a 1 per cent. solution of osmic acid, and gradually increases the dose up to twenty-five minims, having regard to the different susceptibilities evinced by different persons, especially women. Large doses of osmic acid have two advantages over small ones. First, fewer injections are needed, and consequently there are fewer punctures, and it is these that set up the burning pain which constitutes the main objection to this mode of treatment; and, secondly, large doses act more promptly and with greater certainty. These injections are useful in chronic and acute rheumatism without the aid of any other external or internal remedy. Not one case in which this method was tried failed to derive much benefit, and in the majority complete recovery took place after two injections, it being very rare to give as many as six.

962. *Simon on a Case of General Tuberculosis and Tumour in the Cerebellum.*—In the *Birmingham Med. Rev.*, October 1888, p. 150, Dr. Simon records the case of a lad, aged 16, who came on July 25 complaining of headache, staggering gait, and weakness, and said he had been ill ten days. He had only noticed the staggering for five days, and went to work until two days before he was seen. He was a fairly well nourished lad, seemed a little stupid, and lay in bed curled up on his right side; there was slight photophobia, great restlessness, a hot dry skin, with sordes on the lips and a very coated tongue. No diarrhœa, but the abdomen was retracted. Nothing abnormal to be detected in the lungs beyond a few rhonchi. Patient stated that his left arm felt numb sometimes, but there was no loss of sensation, and the pupils were normal. Slight deafness complained of, also a little difficulty in swallowing; reflexes good, no ankle-clonus. Evening temperature 101·8° F. The lad became very restless and gradually became unconscious, the temperature always being between 103° and 102° F., and on Aug. 2 he died. At the *post mortem* examination there was very extensive basal meningitis, and in the left lobe of the cerebellum a yellow caseating mass near the inner margin of the anterior superior lobe, about the size of a filbert. On staining sections of this growth, it was shown to be crowded with tubercle-bacilli. At the apex of the left lung were some caseating masses, and the remainder of the organ showed early infiltration with grey translucent miliary tubercle. The right lung had a cheesy mass at the apex, and the remainder showed early infiltration with grey miliary tubercle. Scarcely any other evidence of tubercle seen in other organs.

Richard Neale, M.D.

963. *Fychowski on Enemata in Typhoid Fever complicated with Cerebral Symptoms.*—In the Warsaw weekly *Gazeta Lekarska*, No. 28, 1888 Dr. I. Fychowski writes that he has seen as many as sixty cases of severe enteric fever complicated with cerebral symptoms, such as delirium with excitement or apathy, the appearance and intensity of the phenomena distinctly coinciding with the presence of highly offensive stools. Departing from the supposition that the cerebral symptoms were caused by fæcal stagnation and decomposition, the writer tried to administer three or four times daily, enemata, made first of ordinary boiled water at the mean temperature, and later on of various antiseptic and deodorising solutions. The results were invariably excellent. In a couple of days the stools lost their offensive odour, delirium lessened or ceased altogether, the excited patients became quiet, the apathetic cheerful, &c. The best effects were obtained from the rectal injection of a 3 per cent. solution of permanganate of potassa. The explanation offered by Dr. Fychowski is very simple: the absorption of gases from stagnating fæcal masses gives rise to morbid changes in the patient's blood, or to an 'auto-intoxication' of his organism—hence the removal of fæces by enemata must necessarily manifest a favourable influence on his state.

964. *Jósefowicz on Albuminuria from Salol.*—In the Polish *Gazeta Lekarska*, No. 23, 1887, Dr. Jósefowicz, of Kovno, records the case of a man of 40, who, while suffering from acute articular rheumatism, took 22·5 grammes of salol in the course of four days; and, when examined by the writer on the fifth day, was complaining of severe

lumbar pain, intense noises in the ear, loss of appetite and constipation. His urine was scanty, turbid, of a dark olive green or almost black colour; it gave the dark violet carbolic reaction with perchloride of iron, and contained a large quantity of albumen, but no morphological elements, except some epithelial cells. Salol was discontinued, salicylate of soda being ordered instead; the symptoms gradually disappeared in a week or so. Dr. Jósefowicz draws attention to the facts—(1) that albuminuria was caused by carbolic acid, which is present in the drug in the proportion of 40 per cent.; (2) that the symptom was caused by a relatively small dose of salol, a medium dose being 6 grammes three times daily; and (3) that salol produced noises in the ear, while Sahli and Georgi assert that the remedy never gives rise to that annoying symptom.

V. Idelson, M.D.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

965. Cowden.—On the External Application of Sulphur in Sciatic Neuralgia. (*Jour. of the Amer. Med. Assoc.*, July 1888, p. 13.)

966. Raye.—On the Treatment of Diphtheria. (*Med. Press and Circular*, August 1888, p. 105.)

967. Fenn.—On Untoward Effects of Cascara Sagrada. (*Therapeutic Gazette*, August 1888.)

968. Hailey-—On Modern Antipyretics in Remittent Fever. (*Indian Med. Gazette*, June 1888.)

969. Dunn.—The Hypodermic Use of Cocaine in Migraine and Bronchial Asthma. (*Therapeutic Gazette*, August 1888.)

970. Peak.—On Orlando, Florida, as a Health-resort. (*Therapeutic Gazette*, September 1888.)

971. Metzenberg.—On Bichloride of Methylene. (*Inaugural Dissertation der Med. Fakultat*, Berlin, July, 1888, epitomised in *Süd-deutsche Apotheker-Zeitung*, and *Der Fortschritt*, Aug. 20, 1888, No. 16.)

972. Gawalowsky.—On Ingluvin. (Appendix to Hagen's *Handbuch der Pharmaceutischen Praxis*, p. 905, reproduced in *Der Fortschritt*, Aug. 20, 1888, No. 16.)

973. Gaiffe, Dr.—On the Phenacetines. (*Bull. Gén. de Thérap.*, July 30, 1888.)

974. Grognot, Dr.—On a Case of Œdema Consequent on the Administration of Antipyrin. (*Bull. Gén. de Thérap.*, Aug. 15, 1888.)

975. Geffrier, Dr.—On the Treatment of Whooping-Cough by Antipyrin. (*Rev. Gén. de Clin. et de Thérap.*, Aug. 2, 1888.)

976. Sée, Professor G.—On the Two Iodides. (*Bull. Méd.*, Aug. 15, 1888.)

977. Delplanque, Dr.—On Cresylic Acid and its Antiseptic Properties. (*Bull. Gén. de Thérap.*, Aug. 15, 1888.)

978. Petresco, Dr.—On the Anti-hæmorrhagic Action of Bryonia Alba. (*Bull. Méd.*, Aug. 15, 1888.)

979. Houdart, Dr.—On Terpine. (*Bull. Méd.*, Aug. 22, 1888,)

980. Serre, Eloy, and Others.—Milk in the Treatment of Pleurisy. (*Rev. Gén. de Clin. et de Thérap.*, Sept. 20, 1888.)

981. Pawinski, Dr.—On Spartein as a Cardiac Remedy. (*Rev. Gén. de Clin. et de Thérap.*, Sept. 20, 1888.)

982. Gamaleïa, Dr.—On Prophylactic Vaccination for Cholera. (*Rev. de Thérap.*, Sept. 1, 1888.)

983. Guelpa, Dr. G.—On Perchloride of Iron in the Treatment of Diphtheria. (*Bull. Gén. de Thérap.*, Sept 15, 1888.)

984. Chéron, Dr.—On the Treatment of 'Uterine Cough.' (*Rev. de Thérap.*, September 1888.)

985. Noël, Dr.—On the Treatment of Diphtheria with Borax. (*Rev. de Thérap.*, Sept. 1, 1888.)

986. Bardet, Dr.—On the Treatment of Fœtid Sweats. (*Rev. de Thérap.*, September 1888.)

987. Persh.—On a Remedy for Tapeworms.

988. Goubert, Dr.—On the Treatment of Dysmenorrhœa. (*Gazz. de Gyn.*, July 1888.)

989. A Permanent Solution of the Proto-iodide of Iron. (*Bull. Gén. de Thérap.*, July 30, 1888.)

990. Antiseptic Preparations for Vaginal Examination or for Dressing Cracked Nipples.

991. Ointment for Obstinate Acne.

992. American Dentifrice.

993. Test for Purity of Chloroform.

994. An Emulsive Tincture.

995. Fiske, Eustace L., M.D.—On Antipyrin as an Analgesic. (*Boston Medical and Surgical Journal*, July 12.)

Art. 965. *Cowden on the External Application of Sulphur in Sciatic Neuralgia.*—In the *Jour. of the Amer. Med. Assoc.*, July 1888, p. 13, Dr. Cowden records a case of sciatic neuralgia, treated with the external application of the flowers of sulphur. The patient was a man, aged 45, weighing 180 lbs., who had suffered for two months from acute sciatic neuralgia. When first seen by the author he could not rise from his bed, he was worn and haggard and in a pitiable condition; he had been treated with hypodermic injections of morphine and atropine every few hours, but did not improve. Dr. Cowden then decided to envelop the limb in dry sulphur; in less than two hours he was sweating profusely, sleeping soundly, and oblivious to all pain. In the evening he woke up, took some nourishment, then again fell asleep for the whole night. Next morning he awoke free from pain, and was able to walk about to his great surprise. He was then put into a large bath, thoroughly scrubbed with soap and water, and put to bed again, the leg and sacral region being again enveloped in sulphur. Next morning he was given another bath and was able to resume his work, being quite free from pain. A few hours after the application of the sulphur the patient's breath and urine were so impregnated with sulphuretted hydrogen that he became quite disagreeable to those around him. (Since Dr. Fuller in 1857 recommended the use of sulphur externally in neuralgia, sciatica, and rheumatism, the remedy has been frequently employed, and, indeed, has become 'popular.' In the reporter's experience good results have, unfortunately, been noticeable by their absence.)

966. *Raye on the Treatment of Diphtheria.*—In the *Med. Press and Circular*, August 1888, p. 105, Mr. Raye gives details of forty cases of diphtheria attended by him during the last few months. Fifteen out of the forty cases were adults, the remainder occurred in children from eighteen months to twelve years of age. Three of the cases were dying when the author was called to them. In three the symptoms were so severe that tracheotomy was performed before they had been long under treatment, and all ended fatally. This leaves thirty-four cases that were treated by the author's method without a single death. Having found that sulphurous acid lotion acted as a germicide in parasitic skin diseases, Mr. Raye thought it might act in a similar manner on

the local materies morbi of diphtheria, and also taken internally it might in the stomach neutralise any portions of the swallowed matter, and act as a blood purifier at the same time. All these expectations were realised. The membrane was invariably deadened in from six to twelve or twenty-four hours, though it took two or three days to get rid of it, the fœtid smell of the breath was soon lost, and this was probably due to the action of the drug on the intestines, as it invariably produced several lax actions, almost amounting to diarrhœa. If laryngeal breathing be present, large sponges wrung out in boiling water must be applied to the throat, and changed every hour. As soon as possible the patient should be surrounded by carbolic steam, and the throat sprayed every hour, at first for two or three minutes, with the following :—sulphurous acid, ℥ss. to ℥j. ; syrup, ℥iij. to ℥iv. ; water to ℥vi. As the case improves this may be used every three or four hours, together with a mixture, every two, three, or four hours, containing one drachm of sulphurous acid in syrup and water for each dose. Plenty of liquid nourishment must be given from the first, with a liberal allowance of port wine and bark, or brandy, if the condition of the patient requires it. In the case of young children under three years the dose of sulphurous acid should be about five minims, but they can bear the spray as strong as adults. If a case be met with in the early stage the author is confident that this method will invariably prove successful, and begs that it may have an extensive trial.

967. *Fenn on Untoward Effects of Cascara Sagrada.*—In the *Therapeutic Gazette*, August 1888, Dr. Fenn contributes a short paper on his experience in the use of cascara sagrada. In cases of really obstinate constipation, the aromatic or proprietary preparations were, for the most part, inert ; some of the published formulæ proved harmful, especially if continued for long, whereas the ordinary cascara, adapted for general and protracted use, is an irritant cathartic, requiring great circumspection and care in its use, instead of being a harmless laxative as many claim for it. Notes of some cases are given in which very unpleasant symptoms were produced, such as vomiting, severe griping, hæmorrhage, and in one case temporary insanity was produced by a patient taking a home-made decoction of the bark. Dr. Tschelgen says, 'cascara sagrada is inefficacious when a prompt cathartic action is looked for. It acts as a purgative only after it has been introduced into the stomach, where it greatly increases the secretion of the gastric juice, &c. When it is injected into the vessels of animals, they often undergo fatal collapse. The blood-pressure is rapidly decreased even after partial dissection of the pneumogastric nerve.' Recently Dr. Cotter has reported two cases in which drachm doses of the fluid extract produced symptoms resembling those of cholera.

968. *Hailey on Modern Antipyretics in Remittent Fever.*—In the *Indian Med. Gaz.*, June 1888, p. 168, Surgeon Hailey records some cases of remittent fever treated by the new antipyretics. The author found that kairin was undoubtedly inferior to others, inasmuch as in large doses it may produce dangerous depression, whilst in small doses it is very uncertain in its action. Antifebrine was found superior to antipyrin, both in its power of reducing temperature and its absence from bad after-effects. When an almost continuous use of the drug is requisite, antifebrine is superior to antipyrin in not causing any cardiac weakness in adynamic fevers where the heart-tissue is prone to degenerate ; in these fevers if antipyrin be used it should be given only when the temperature is very high, and if the heart shows any signs of weakness small doses of digitalis and strophanthus must be given throughout the attack.

969. *Dunn on the Hypodermic Use of Cocaine in Migraine and Bronchial Asthma.*—In the *Therapeutic Gaz.*, August 1888, p. 516, Dr. Dunn states that in October 1886, while suffering from an attack of migraine, he took hypodermically 1¼ grains of cocaine. In about two minutes complete relief was obtained. The physiological effects were, however, very marked ; there was marked mental and reflex excitability, with quickened pulse, and a slight tendency to palpitation, and the author states he was able to hold his breath for two minutes without any discomfort. After one or two hours the excitable stage passed off, leaving a slight feeling of exhaustion ; but the author was able to resume his work, and felt very much better than when he used to take bromides or morphine for the pain. In several other cases of migraine marked success was obtained by injecting ½ to ¾ grain, and where this treatment was attended by much wakefulness and restlessness, the addition of about ⅛ grain of morphine gave great relief without producing sickness. In cases of bronchial asthma, where the dyspnœa is very troublesome, the hypodermic injection of ¼ to ½ grain of cocaine, combined with $\frac{1}{12}$ to ⅛ grain of morphine, causes almost instant relief.

970. *Peak on Orlando, Florida, as a Health-resort.*—In the *Therapeutic Gazette*, September 1888, p. 596, Dr. Peak gives a very graphic account of the splendid climate met with in Orlando. It is in the centre of a famous orange-culture country, and is one of the highest points at the narrowest part of the peninsula of Florida, nearly midway between the Atlantic and Gulf coasts. The prevailing east winds of the Atlantic by day, and Gulf of Mexico by night come ladened with the pungent aroma of the pine forests. The mean humidity for the three winter months is 78°·4, and the mean annual temperature is about 72°·6, about that of Naples. The highest summer heat for a few days in August is 98° F., but this is evenly tempered by the constant and alternating sea-breezes, and the cool afternoon rains of summer, leaving the night air cool, clear, and wholesome. There are no heavy, oppressive, sultry nights, and the summer dawn is refreshed with a slight chilliness. The author regards the situation of Orlando as preferable in all cases of throat and lung troubles, and incipient phthisis. Asthmatics find a general relief in the climate, and in many instances a radical cure. Rheumatism is greatly ameliorated by the softness of the climate, yielding easily to treatment. RICHARD NEALE, M.D.

971. *Metzenberg on Bichloride of Methylene.*—The conflicting opinions and observations on the narcotic action of the bichloride of methylene, and its advantages and demerits in comparison with chloroform, induced Dr. Alfred Metzenberg to make a series of experiments with pure bichloride of methylene on animals in Professor Liebreich's laboratory in Berlin. He draws from the results of numerous observations the following conclusions : The action of bichloride of methylene on the organs of respiration and circulation is identical with that of other bichlorated narcotics which, as it is well

known, have a toxical effect on the medulla oblongata—namely, arrest the respiration. Animals, after an overdose of bichloride of methylene, can therefore be recalled into life by artificial respiration, whilst the reanimation of animals under the toxical influence of the trichlorate narcotics, and also of chloroform, will not succeed, even when the artificial respiration is immediately resorted to, owing to their rapidly paralysing effects on the ganglia of the heart. One drawback in the narcosis by bichloride of methylene is the alleged peculiar jerking movements of the extremities, which Regnauld and Villejean called 'swimming movements.' [I never observed these alleged movements in administering Robin's bichloride of methylene. — *Rep.*] The attempts to prevent these by various combinations have not yet led to any result; but, however it may be, they are no serious impediment to a more general and speedy adoption in practice of this justly recommended narcotic.

972. *Gawalowsky on Ingluvin.*—G. Gawalowsky, at Brünn, Moravia, examined the ingluvin, a kind of pepsine prepared from the gizzard of fowl, which has recently been employed in America as a specific in sickness during pregnancy. It represents a whitish-yellow or loam-coloured powder of the specific smell of bone-dust, of saline taste, and neutral reaction. It dissolves very slowly in cold water, and is partially soluble in water of 35–37° C. (95–98°·6 F.), forming a pale-brownish, slightly viscid fluid, leaving an insoluble flaky-fibrillous, partly gritty residue. It consists, according to Gawalowsky's analysis, of:—Water, 8·500 per cent.; chloride of sodium, 2·925 per cent.; other incinerated substances, which are perfectly soluble in water, 1·728 per cent.: total amount of ash, 4·650 per cent.; pepsine, 27·000 per cent.; amylum, fibrine, and extractive matter, 59·860 per cent. The ingluvin, therefore, is a compound of 3 per cent. of chloride of potassium and 37 parts of a very impure preparation of pepsine, mixed with amylum. A very impure pepsine preparation is prepared in Buenos Ayres from the gizzard of the American ostrich (*Rhea Americana*), which comes into the market under the name of *Buche de Avestruz* (ostrich's craw). Ferd. Adalb. Junker, M.D.

973. *Gaiffe on the Phenacetines.*—The phenacetines, or acetphenethydines, are three in number—ortho-acetphenethydin, metaphenethydin, and para-acetphenethydin. The metaphenethydin is very difficult to prepare, and has no therapeutic effects. The insolubility of the phenacetines in water at ordinary temperatures constitutes an almost insurmountable difficulty in experiments upon animals. They cannot be given either by hypodermic or intravenous injection. By the mouth, two grammes have been given to a fowl without producing any effect beyond lowering the temperature 1°·2 C. In rabbits two and a half grammes did not produce any toxic effect. It may therefore be assumed that the phenacetines are devoid of toxic properties. The antithermic effects attain their maximum four hours after ingestion, and disappear in from eight to ten hours. The pulse is not affected. At the Hôpital Cochin a tuberculous patient, 20 years of age, suffering from intense dyspnœa, with epigastric pain and vomiting, was given five grains of the drug before a meal, with the effect of promptly relieving these symptoms. In a case of nervous polyuria the quantity of urine was reduced to a third, but at the end of three months the patient was obliged to take thirty grains to obtain the effect which was at first obtained with ten grains. In five cases the orthophenacetine of French manufacture proved a great success. The cases comprised one of acute tuberculosis, in which the temperature was reduced from 40°·2 C. to 37°·5 C. by a half-drachm dose; two cases of muscular rheumatism and two of sciatica, all much improved by 20-grain doses of the drug. It will be seen that the *ortho* requires to be given in much larger doses than the *para*. On five occasions uncomfortable symptoms were noted, due on one occasion to the French preparation and on four occasions to the German drug. The symptoms were profuse sweating, epigastric pain, nausea, and prostration. The author concludes that the ortho- and the para-acetphenethydin are powerful antipyretics and analgesics, and present several advantages over antipyrin—namely, 1, that they are not poisonous; 2, that the effect is produced with half the dose; 3, that the cost is very much less; and, 4, because their manufacture is not a monopoly.

974. *Grognot on a Case of Œdema Consequent on the Administration of Antipyrin.*—A woman, aged 35, suffering from chronic endometritis and subject to attacks of gall-stone. On June 5 she was ordered one gramme of antipyrin, which she took the first thing in the morning on an empty stomach. A quarter of an hour later, the patient complained of dryness of the nostrils and difficulty in breathing, with a feeling of constriction in the nose and throat. The voice was thick and hoarse; at the same time the face became puffed, the swelling being more marked in the lips. Soon after the breasts became very tender and became enormously distended. All these symptoms disappeared in about twenty minutes. A fortnight later the patient was prevailed upon to take another dose and the same symptoms presented themselves, lasting for about the same length of time. The author had noted four other cases of erythema due to antipyrin in his practice since the introduction of the drug. He also quotes a case observed by Dr. Giquel, of Vannes. The patient, a rheumatic subject, was ordered to take a gramme of the drug three times a day. Ten minutes after the first dose, the patient experienced an acute itching of the gums; a few moments later, he had a fit of sneezing which lasted a quarter of an hour; then the larynx became involved. Meanwhile the temples throbbed and the head was painful. The symptoms had disappeared in the course of fifteen hours. A repetition of the dose gave rise to the same symptoms. In the first case the drug was obtained from M. Petit, of Paris, in the second from Dr. Knorr, of Tremblay.

975. *Geffrier on the Treatment of Whooping-cough by Antipyrin.* — In the first case, one of whooping-cough of average severity, but accompanied by serious spasmodic complications which resisted valerianate of caffein and the bromides, these yielded at once to eight-grain doses of antipyrin. At the same time the attacks of cough diminished from fifteen to five in the twenty-four hours, and they ceased altogether in two months. In the second case the effect was not as prompt, but the attacks had fallen from twenty to ten in eight days. Dr. Geffrier attributes the slowness of the amelioration to his having employed too small a dose (15 grains daily). In the third case the attacks were notably diminished by sixteen grains of antipyrin in the twenty-four hours.

976. *Sée on the Two Iodides.*—Alluding to the

disfavour into which potassium and its salts tend to fall, M. Sée points out that the debilitating effects of potassium salts on muscular structures are also found, in a slightly smaller degree, in sodium salts. In reference to the action of potassium salts on the heart, he maintains that the results obtained by intravenous injection are not observed when they are given by the mouth. He demonstrates that an Irishman who eats his two or three pounds of potatoes in a day consumes about 2½ ounces of potash, compared to which the amount of potash contained in the usual doses of iodide of potassium is simply ridiculous. He urges that the fear of potassium is utterly without foundation, and should be banished from therapeutics. He adds that symptoms of iodism are as common with sodium iodide as with the potassium salt.

977. *Delplanque on Cresylic Acid and its Antiseptic Properties.*—Cresylic acid is obtained from the creasotes of coal-tar. It is a phenol derived from toluene. Its formula is C_7H_8O. It is a colourless, refractile liquid, with an odour like creasote, and slightly caustic. It is toxic to rabbits in doses of two grammes per kilogramme, the symptoms being convulsive spasms, salivation, accelerated respiration, and paralysis of the hinder extremities. It prevents decomposition in urine and milk in somewhat smaller doses than phenol. Added to cultivations of the bacilli of typhoid fever, cholera, &c., a drop of cresylol prevented further growth. The author concludes that cresylol is possessed of powerful antiseptic properties superior to those of phenol. It is, moreover, four times less poisonous than phenol.

978. *Petresco on the Anti-Hœmorrhagic Action of Bryonia Alba.*—The bryonia alba, which is quite distinct from the bryoma dioïca, when administered internally to animals, produces a contraction of the capillaries which may lead to complete arrest of the circulation. The ordinary dose is from 20 to 30 grammes of the dried root in 300 grammes of water. It contains a glucoside, breïne, which is very active. It has been tried in various forms of hæmorrhage with excellent results.

979. *Houdart on Terpine.*—The author recommends a formula containing 10 grammes of terpine, dissolved by the aid of heat in 60 grammes of glycerine. The dose is about a teaspoonful mixed with sweetened water or syrup. By employing alcohol a still more perfect solution is obtained. ℞ Terpine, 5 grammes, alcohol (90°) 20 grammes, and glycerine 40 grammes. Dissolve the terpine in the glycerine and add the alcohol. M. Houdart recommends that from 8 to 16 grains of terpine be given as an expectorant in bronchitis, and from 2 to 8 grains in affections of the urinary tract. Large doses must be avoided in patients suffering from any renal affection.

980. *Serre, Eloy, and Others on Milk in the Treatment of Pleurisy.*—Reabsorption of the fluid in pleurisy can be obtained far more rapidly on a simple milk diet than by diuretics, drastic purges, and blisters. It causes a notable increase in the amount of urine excreted, and the dyspnœa decreases in direct proportion to the increased diuresis. During the inflammatory stage the best treatment consists in antiphlogistic and antithermic remedies, but, as soon as the fever has abated, the milk treatment is indicated. The authors say, 'the milk treatment is adapted to the treatment of pleuritic patients who can afford to wait;' the effects being obtainable only in four or five days. The milk may be given fresh or boiled, hot or cold, pure or mixed with aromatics, with soda or mineral water, but in any case the diet should be restricted to milk as a base. It should be taken by mouthfuls every hour or hour and a half, the quantity ingested in the twenty-four hours being from three to six pints. It should be continued for some days after the disappearance of the exudation, to avoid recurrence, and then the usual diet should be returned to by degrees. Thus managed, M. Eloy asserts, the treatment becomes one of the most powerful hydrogogues destined to replace thoracentesis. 'In some cases the urethra may take the place of the trocar.'

981. *Pawinski on Spartein as a Cardiac Remedy.* A great difference exists between the effects produced by small, medium, and large doses of spartein sulphate, on the heart-beat and pulse. Small doses (1 to 1⅓ grain in the twenty-four hours) augment and regulate the action of the heart, and raise arterial pressure. Medium doses (4 to 6 grains daily) produce no effect whatever on the circulation, while large doses (8 to 16 grains daily) depress the action of the heart and increase any pre-existing irregularity. These conclusions bear out the observations made as to the physiological action of spartein which stimulates the vagus in small, and paralyses it in large doses. The author is not disposed to rank spartein among 'drugs possessing a marked influence over cardiac action.' It has not shown itself, in his hands, to be of very great efficacy in cardiac lesions at the period of passive congestion, nor in cardiac asthma. Of possible benefit in angina of nervous origin, it is useless in real angina pectoris. Spartein is certainly of use in cardiac irregularities of nervous origin, and even in valvular disease when occurring in hysterical or neurasthenic patients. It is useless in arhythmical conditions dependent upon sclerosis of the coronary arteries, or muscular degeneration, and in valvular lesions producing incompetence. In the treatment of exophthalmic goître, the author combines the drug with quinine. It acts as a slight diuretic when the heart is not too exhausted, but is, in any case, inferior to digitalis. Although Dr. Pawinski is unable to confirm the advantages claimed for spartein as a cardiac medicine, he recognises a very valuable sedative action on the nervous system. Having noticed that it succeeded best in heart-disease occurring in 'nervous' patients, it occurred to him to try it in functional cardiac affections. He obtained great success in the treatment of palpitation and præcordial anxiety; in neurasthenic and hysterical patients and persons addicted to the abuse of alcohol, tobacco, and morphine. In such cases small doses of spartein invariably produced a narcotic effect. The doses he particularly recommends are from 2 to 7 grains in the twenty-four hours.

982. *Gamaleïa on Prophylactic Vaccination for Cholera.*—In a communication presented to the Academy of Medicine by M. Pasteur, the results are given of the observations made by Dr. Gamaleïa at Odessa, on a method of affording immunity against cholera infection by means of the prophylactic injection of the attenuated virus. The method followed was that of M. Pasteur in his own investigations on fowl-cholera, &c. Ordinary cultures of the cholera-bacillus have only a minimum virulence, and for a long time the author believed that cholera was not transmissible to animals. He ultimately discovered, however, that passage through the organism of a

guinea-pig rendered the virus capable of killing pigeons by the production of a 'dry' cholera. After several consecutive inoculations the virulence of the cultivation becomes such that pigeons inoculated therewith succumb in from eight to twelve hours. The ordinary cultivations render pigeons refractory to reiterated infection with the more virulent agent—viz., the blood of pigeons which had died of this dry cholera. If this 'passage virus' be cultivated in a nutrient bouillon and then heated to 120° F. for twenty minutes, the microbes are killed, but an actively toxic substance remains which, when injected in quantities of 4 cubic centimètres into a guinea-pig, produces a progressive lowering of the temperature and death in from twenty to twenty-four hours. At the *post mortem*, they found marked hyperæmia of the stomach and intestines, but, of course, no cholera-bacilli. By reducing the quantity of the injection to a point below the production of severely toxic effects, it was found that both guinea-pigs and pigeons were protected against subsequent infection. This method is particularly interesting as affording an example of preventive inoculation with sterile vaccine. In other words, it is 'chemical vaccination.' The method is sure and free from danger, and the vaccine can be dosed so as to be quite inoffensive, though conferring an absolute immunity. He hopes, therefore, that the method may prove applicable to the protection of human beings against cholera infection. He has since gone himself to Paris to repeat his experiments and demonstrate the innocuousness of his 'sterile vaccine' on himself.

983. *Guelpa on Perchloride of Iron in the Treatment of Diphtheria.*—According to Dr. Guelpa, cases of diphtheritic sore-throat, not complicated with other infectious disease, can be cured within a week, almost without exception, if treated from the very beginning with copious irrigations of an aqueous solution of perchloride of iron (1 in 100) of the nose and throat, provided that the method be carried out every two or three hours, *night and day*. These irrigations of the throat generally prevent the spread of the disease to the larynx and trachea, and even after tracheotomy has had to be performed for extension into the trachea, the use of a spray through the cannula has sometimes proved successful.

984. *Chéron on the Treatment of 'Uterine Cough.'* Certain functional and organic lesions of the utero-ovarian apparatus, sometimes give rise to a dry irritating cough, not to be explained by the condition of the lungs or throat. This symptom readily yields to the valerianates. If the cough be associated with derangement of the cerebral circulation—flushes of heat, vertigo, &c., the best drug is the valerianate of quinine in the following form:—℞ Valerianate of quinine 1 gramme, syrup 40 grammes, infusion of black coffee 120 grammes. Two or three tablespoonfuls to be taken half an hour before or two hours after meals. If the cough be troublesome only at night or shows a tendency to periodicity, the same drug is of benefit. ℞ Quininæ valerianatis 1 gramme; ext. cinchonæ, q. s.; fiat 20 pilulæ. One before each meal.

985. *Noël on the Treatment of Diphtheria with Borax.*—In an epidemic of diphtheria Dr. Noël treated his patients exclusively with borax, with the result of having only three deaths out of sixty cases. He claims that it acts by provoking an abundant salivation, which softens, dissolves, and removes the false membranes. The dose is from 10 to 15 grains for infants under one year, and from 1 to 2 drachms for adults, spread over the twenty-four hours. He objects to any local measures as being injurious to the patient.

986. *Bardet on the Treatment of Fœtid Sweats.*—For fœtid sweating of the feet, Dr. Bardet recommends washing the feet at least once daily, following it up with frictions with alcohol. The stockings to be changed daily, powdering them with a small quantity of a powder containing:—Talc, 40; trinitrate of bismuth, 45; permanganate of potassium, 13; salicylate of sodium, 2; misce. When the objectionable perspiration is general, the body should be powdered with—℞ Rice-powder, 60; subnitrate of bismuth, 15; permanganate of potassium, 10; talc, 5; Misce.

987. *Persh on a Remedy for Tapeworms.*—Bernard Persh has obtained excellent results in the treatment of tapeworm by the aid of the following formula:—℞ ol. crotonis, gtt.j.; chloroform, ʒj.; glycerini, ʒj. This dose is taken on an empty stomach in the early morning without any preliminary preparation. It is not disagreeable to take, and operates very promptly.

988. *Goubert on the Treatment of Dysmenorrhœa.*—For young girls Dr. Goubert prescribes: Iodoform, ½ grain; ext. belladonna, ⅛ grain; asafœtidæ, 1⅛ grain. In pill form. Beginning six or eight days before the time of menstruation, six pills should be taken daily. For adult women he prescribes: Potass. iodid., ʒj.; tinct. croci, ʒij.; tinct. belladonna, ʒvj.; syrup. aurant. cort., ad. ʒvj. Dose, a tablespoonful morning and evening, in any convenient liquid, for a week preceding menstruation.

989. *A Permanent Solution of the Proto-iodide of Iron.*—℞ Sugar, 4 grammes; iodine, 5 grammes; reduced iron, 8 grammes; distilled water, 40 grammes; pure glycerin, 110 grammes. Pound the sugar and the iodine together in a mortar and add gradually the distilled water. Place the mixture in a capsule and maintain at a moderate heat, stirring it with a glass rod. Filter off the excess of iron. The glycerin is then added, the product weighing 150 grammes. Six grammes of this solution, added to 100 grammes of syrup, correspond to the strength of the French Syr. Ferri Iodidi.

990. *Antiseptic Preparations for Vaginal Examination or for Dressing Cracked Nipples.*—1. Vaseline, ʒj.; boracic acid, ʒj. 2. Biniodide of mercury, 5 grains; vaseline, ʒj. 3. Iodoform, iodol, or salol, ʒj.; vaseline, ʒj. 4. Creasote, ♏xv.; vaseline, ʒj. 5. Acid carbolici cryst, ʒij.; olive-oil, ʒss.

991. *Ointment for Obstinate Acne.*—℞ Resorcine, 3 to 5 grammes; powdered starch, 5 grammes; oxide of zinc, 5 grammes; vaseline, 15 grammes. Apply this ointment on going to bed, and rub it off in the morning with olive-oil and wadding. It never gives rise to irritation, and its effects begin to be felt within three days. Incidentally one may recall the proverb *matrimonio curat varus—varus*, in this case, being acne. At the same time the patient should abstain from beer, wine, liqueurs, and fatty food.

992. *American Dentifrice.*—Tonquin bean, 1 gramme; finely powdered pumice stone, 8 grammes; carbonate of magnesia, 10 grammes; iris powder, 2 grammes; precipitated chalk, 20 grammes; bol. armenia, 1 gramme; essence of peppermint, q.s.

993. *Test for Purity of Chloroform.*—Phthaline of phenol ($C_{20}H_{14}O_4$) is colourless. When dissolved

in a saturated solution of carbonate of sodium, it affords a very delicate test of the presence of an acid. Valpius has applied this to test for the presence of acid in chloroform. Two drops of the alkaline solution in two grammes of water are mixed with ten cubic centimètres of chloroform. If any acid be present, a coloration is at once observed. If the chloroform be perfectly pure, no discoloration should take place even in twenty-four hours.

994. *An Emulsive Tincture.*—℞ Quillaia saponaria bark, 20 grammes; bals. Tolu, 200 grammes; vanilla, 5 grammes; lemon peel, q.s.; alcohol at 80 per cent., 1 litre. Macerate the whole for ten days and filter. The resulting aromatic tincture forms an easily prepared and palatable emulsion with castor-oil, copaiba, scammony, &c. Thirty grammes of castor-oil and 2 grammes of the tincture should be well mixed in a mortar to which is added 50 grammes of syr. aurant. recens. It is peculiarly adapted for the preparation of an anthelmintic draught with ext. filicis liq.

ALFRED S. GUBB.

995. *Fiske on Antipyrin as an Analgesic.*—Dr. Fiske writes to the *Boston Medical and Surgical Journal* that, for the past six months, observations upon the use of antipyrin have been made at the Adams Nervine Asylum. In twenty-six cases its value as an analgesic or hypnotic has been more or less fully demonstrated. Headaches of a purely neuralgic character have been wholly or in part relieved. Those dependent on digestive disturbances have failed of any noticeable improvement from its use. Patients with sensations of heat and fulness in the head, flushing of the face, and headaches preceding or attending catamenia, have been benefited. Of twenty-two cases of headache, eleven were relieved, seven partially, and four not relieved, three of the latter class having but one exhibition of the drug. Intercostal neuralgias, pain about the joints and heart, have also been relieved. In some patients, antipyrin, by diminishing the intensity of the pain or relieving it, allowed them to sleep, while in others it seemed to directly induce sleep. One patient, having used morphine before admission for headache, received considerable benefit from antipyrin as a substitute, so that the use of the morphine was wholly given up. Unlike morphine in its after effects, antipyrin also does not require increasing doses, and in many cases of headache or moderately severe pain nearly as satisfactory results can be obtained, but in extreme cases it is less reliable. No unpleasant effects, like cardiac depression or collapse, have occurred in any case. Some patients prefer antipyrin to any other remedy, partly because of relief from pain, and partly because of its agreeable effect, one patient enjoying the slight sweating which followed its use. When first used, ten to fifteen grains in solution were given, and occasionally repeated in a few hours, if needed. Later, fully as good results have been obtained from four or five grains every half hour till three to five doses are taken, as required. A few patients take it at evening when needed, one in particular every night. Another obtained immunity from pain on two grains, t. i. d., and preferred it to anything else. No hypodermics were given. Dr. Fiske, therefore, infers that antipyrin has been found a partial substitute for morphine in relieving pain without deleterious effects, and one whose action is more or less certain.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

996. SCHLESINGER, DR.—A Laparo-Salpingotomy in 1784. (*Gazette Hebdomadaire des Sciences Médicales de Montpellier*, Jan. 7, 1888.)

997. PIERING, DR. (Prague).—On the Ætiology of Gas-cysts of the Vagina. (*Präger Zeitschrift für Heilkunde*, vol. ix., part 3; *Centralbl. für Gynäkologie*, No. 35, 1888.)

998. ALTMANN, DR.—Atrophy of the Inactive Mammary Gland. (*Inaug. Diss.*, Munich, 1888, and *Centralbl. für Gynäk.*, No. 35, 1888.)

999. CHIARI, DR. H.—On the Morbid Anatomy of Catarrh of the Fallopian Tube. (*Präger Zeit. für Heilk.*, vol. viii.; *Centralbl. für Gynäk.*, No. 35, 1888.)

1000. WHALEY, DR. LEWIS (Blountsville, Alabama).—An Anomalous Case Discovered in the Female Sex. (*Atlanta Med. and Surg. Jour.*, September 1888.)

1001. REED, DR. C. A. L. (Cincinnati).—The Principles of Practice involved in the Extirpation of the Uterine Appendages when not the Seat of Tumour. (*Jour. of the American Medical Association*, Aug. 25, 1888.)

1002. DUDLEY, DR. F. C.—A Year's Work in Abdominal Surgery. (*Obstet. Gaz.*, August 1888.)

1003. DE LA TOUCHE, DR.—On the Use of Subcutaneous Injections of Antipyrin and Cocaine during Labour. (*Bull. Gén. de Thérap.*, July 30, 1888.)

1004. POLAILLON, M.—On the Danger of Washing the Peritoneum in Laparotomy. (*Bull. Méd.*, Aug. 26, 1888.)

1005. STEVENS, DR. E. B.—On the Influence of Morphine on Menstruation. (*Obstet. Gazette*, August 1888.)

1006. KOLLOCK, DR. W.—On the Eyes at Puberty. (*Archives of Gynæcology*, August 1888.)

1007. BUCKMASTER, DR. A. H.—On a Case of Extra-uterine Pregnancy; Embryo destroyed by a 20-Milliampère Current without Interruptions. (*Medical News*, August 1888.)

1008. GRANDIN, DR. EGBERT H.—On the Use of Antipyrin During Labour. (*Pacific Med. and Surg. Jour.*, August 1888.)

1009. BORIAKOVSKY, DR. AFANASY G., and REIN, PROFESSOR GHEORG E.—On Castration in Hystero-Epilepsy. (*Proceedings of the Kiev Obstetrical and Gynæcological Society*, 1887, vol. i., p. 55, and 1888, vol. ii., pp. 1 and 71).

1010. WARDEN.—On a Fatal Case of Labour. (*Kansas City Med. Index*, August 1888.)

ART. 996. *Schlesinger and Monprofit on the First Operation upon the Fallopian Tube.*—(This subject was brought forward by Dr. Schlesinger at a meeting of a medical society in St. Petersburg, then published by a Russian correspondent in a Montpellier paper, and recently quoted, with comments, in Dr. Monprofit's *Salpingites et Ovarites*, Paris, 1888.) In 1784 a Dr. Seydel had under his care at Sarepta, Astrakhan Government, Russia, a multiparous woman, aged 42. A painful tumour appeared in the right iliac fossa after abortion. Dr. Seydel made an incision from the umbilicus to the right abdominal ring, passing over the middle of the tumour. The peritoneum was opened by means of a curved, probe-pointed bistoury. Three veins were tied, and, as the intestines protruded, they were replaced and kept within the abdominal cavity by means of a napkin soaked in tepid milk. The tumour, strongly adherent to adjacent structures,

was attached by a pedicle to the uterus. Dr. Seydel carefully explored the relations of the tumour, and found that it was not ovarian, but clearly tubal ('Quâ quidem investigatione certo et indubitato cognovi tumoris hujus sedem non ovarium fuisse sed tubam'). It was laid open, washed out with a decoction of Peruvian bark mixed with a solution of myrrh, and then stuffed with charpie soaked in balsam of Arceus. Pieces of linen, soaked in oil of roses, were laid over the intestines to prevent them from adhering to the parietal peritoneum. The abdominal wound was dressed with linen, supported by a plaster. Later on, sutures (*sutura cruenta*) were applied. Drainage by means of a silver tube did not answer; the operator aspirated by suction, so as to remove the purulent fluid which collected in the exposed cavity of the dilated tube. This was done four times daily, and the dressings were changed on every occasion. There was fever for a week, but at the end of that period the discharge ceased, and the wound began to close, the patient recovering completely. At the end of two years Dr. Seydel heard from his patient; she was in perfectly good health.

997. *Piering on the Ætiology of Gas-cysts of the Vagina.*—In Professor Schauta's wards a woman, aged 24, in the eighth month of pregnancy, displayed the following condition of the genitals. There were a few small varices of the labia, the vagina was capacious, its mucous membrane red, relaxed, and not hypertrophied, and much creamy discharge escaped from the vulva. Over the whole vagina and part of the cervix were abundant thin-walled prominences, scattered or in groups, varying from the size of a millet seed to that of a pea. These prominences or cysts were very tense, and on puncture an odourless and colourless gas escaped, often with a slight hissing sound. Emphysematous crackling was heard on pressure over the larger cysts. A small piece of the vaginal mucous membrane was snipped off for histological examination. The cysts were found to arise from the lymph-follicles and lymph-spaces. Chiari (*Zeitschrift für Heilkunde*, 1885, vol. vi., p. 81) and Breisky (*Die Krankheiten der Vagina*, 1886, p. 115) described this 'emphysematous vaginitis' as originating in disease of the entire lymphatic apparatus of the vagina, and Dr. Chiari is of the same opinion. Three weeks after the excision all the cysts, even the smallest and most isolated in the vault of the vagina, had disappeared, and never formed again. The dilated lymph-spaces had been drained by the excision of a piece of the mucous membrane, including one of the cystic dilatations, and all the gas had escaped.

998. *Altmann on Atrophy of the Mammary Gland through want of Use.*—The rate of infant mortality in the table land of Bavaria and Swabia is very high, chiefly on account of the almost universal practice of rearing children by hand. The peasant-women find that they rarely have enough milk to feed their babes. Dr. Altmann examined the mammæ of thirty Bavarian women of from fourteen to fifty years of age, and compared them with specimens taken from four Silesian women; for in Silesia the peasants nearly always suckle their own children. He found that out of twenty-nine of the Bavarian samples in only eight did the weight exceed 100 grammes, or about one quarter of a pound; the average range in normal subjects being, according to Hennig, 160–556 grammes. Experience has shown, however, that the smallest breasts, in healthy women, are the best for suckling. The microscopic appearances are of some importance. Dr. Altmann compared sections from Bavarian nulliparæ with sections from Silesian nulliparæ, and sections from Bavarian fertile women, with sections from Silesians who had borne children. In the specimens from Bavarians he found scanty tubules, ill-formed acini, and abundant dense connective tissue. In the Silesian specimens the tubules and acini were well developed, and the connective tissue was loose. He attributes the atrophic condition of the mammæ in Bavarian women to hereditary influence, the custom of rearing children by hand having been maintained for many generations.

999. *Chiari on the Morbid Anatomy of Catarrh of the Fallopian Tube.*—Out of a series of 760 female bodies, Chiari found nodules in seven, ranging from the size of a pea to that of a bean, at the uterine end of the tube. The nodules were often symmetrical, sometimes unilateral, and sometimes two lay close together. These nodules have been described as small myomata by other authors. On careful examination, Chiari found that chronic catarrh of the tube and uterus was present in every case. The nodules were simply diseased portions of the tubal wall. The mucous membrane on their surface was thin in six cases, thickened and infiltrated with small cells in one. Small cysts, visible to the naked eye, were to be detected in the nodules. The muscularis mucosæ was usually normal, and the thickening was due to hyperplasia of the muscular coat of the tube. In all cases this coat contained an abundance of cavities, varying in size from microscopic dimensions to the diameter of a hemp-seed. The cavities were lined with a single layer of cylindrical epithelium, and surrounded by a thin layer of connective tissue. In six cases these spaces contained a serous fluid, in one pus. Hence the small nodules were in no sense myomata, but circumscribed hypertrophy and hyperplasia of muscular tissue, probably set up by cystic cavities formed by involution of the mucous membrane into the muscular coat of the tube. The mucous membrane, when swollen by catarrhal inflammation, was very subject to undergo this process at the uterine end of the tube when the canal was wide. These nodules were found in subjects from 20 to 38 years of age, and appeared to undergo retrograde metamorphosis. [Dr. Chiari evidently described a condition already investigated by Dr. Martin (*Zeit. für Geburtsh. und Gynäk.*, vol. xiii., Part 2), who terms it follicular salpingitis; but Dr. Chiari's observations are original as far as they refer to the nodules at the uterine end of the tube. Dr. Martin has shown that the whole of the tube is often involved.—*Rep.*]

1000. *Whaley on a Case of Pregnancy in the Left Half of a Double Monster.*—The patient was a well-nourished girl, aged 19, married about one year. She had suffered from amenorrhœa and vomiting for two months. Dr. Whaley discovered four inferior extremities, two navels, and duplicity of all the organs below them. She had menstruated from both uteri regularly till the present illness; one alimentary tract was occasionally constipated, whilst the other was relaxed. [A portrait of the patient is appended; she is fully dressed, with her skirts raised to the knees, exposing only the four lower extremities. The outermost left leg is of the proper length and well developed, the outermost right is long, but thin; the two central legs are much shorter. At first sight, the latter seem as

though they belonged to a thoracopagous parasite, but the toes and knees are directed forwards; they are covered by stockings and boots, so that the side to which they belong is not clearly indicated.—*Rep.*] Pregnancy in the left uterus was detected. When informed of the nature of her case, she said: 'If it had been in my right side I would come nearer believing that you are correct.' As she was in very bad health, and the left pelvic outlet measured but two inches antero-posteriorly by one and a half laterally, labour was induced by ergot, and by two introductions of the sound. She was safely delivered of a perfectly formed fœtus, 'of ordinary size for three and a half months' term.' [From the evidence of the patient it would appear that the right genitals were, as a rule, used functionally. It is unfortunate that Dr. Whaley's paper was 'simply an outline or synopsis of the case from memory, as the notes in the case have been misplaced.' No mention is made as to how far the contiguous parts of the two pelves were fused or separate. The monstrosity was probably posterior dichotomy, sub-variety schizorachis.—*Rep.*]

1001. *Reed on the Extirpation of the Uterine Appendages for Diseases other than Tumour.*—The author, a professor in the Cincinnati Medical College, admits that his subject forms an unsettled question. The appendages are not vital organs. Chronic inflammatory diseases appear to spoil the ovaries and Fallopian tubes, and Dr. Reed does not believe in attempts at conservative surgery of a speculative nature, such as catheterisation of the tubes. He reviews 'Battey's operation,' and shows that Dr. Battey originally operated on principles now discarded. The operation is an abdominal section for the removal of the healthy ovaries alone, undertaken for the purpose of precipitating the menopause. One of the most recent extensions of this department of surgery is abdominal section, irrigation, and drainage, with removal of the appendages, if necessary, in puerperal peritonitis. The dread of 'unsexing' women is based on several errors already exposed. Dr. Reed denies that Mr. Lawson Tait advocates abdominal section whenever the surgeon does not know what is the matter with a woman; his real words being 'in every case of disease of the abdomen or pelvis, in which the health is destroyed or life threatened, and in which the condition is not evidently due to malignant disease, an exploration of the cavity should be made.' Dr. Reed is less scrupulous about malignant diseases, having removed a thirty-pound sarcomatous ovary with good results. Provided the malignant disease be removable, an operation is quite justifiable. He concludes by summarising the cases where the practitioner would advise extirpation of the uterine appendages. 1. In cases in which, after adequate investigation, he is assured that there is intratubal accumulation. 2. In cases in which, from congenital deficiency of some of the organs, there can be no healthy exercise of the menstrual function. 3. In cases of chronic ovaritis, giving rise to intolerable pain, and in which cure has been demonstrated as impracticable by conservative means. 4. In cases of irreducible displacement of the ovaries, giving rise to severe pain. 5. In cases of large uterine myoma, giving rise to dangerous hæmorrhage, and in which the electrical treatment has failed after a reasonable trial, and, finally, in which extirpation of the appendages can be practised with greater safety than hysterectomy. 6. In cases of puerperal peritonitis and intra-peritoneal accumulations in which, after opening the abdomen, the appendages are found diseased. 7. In cases of intra-peritoneal hæmatocele in which, on exploration, a bleeding point is found in a ruptured tube. 8. Exploratory incision should be advised in all cases in which any of the foregoing conditions are reasonably suspected, and in all cases 'of disease of the abdomen or pelvis in which the health is destroyed or life threatened, or in which the condition is not evidently due to irremovable malignant disease.' ALBAN DORAN.

1002. *Dudley on a Year's Work in Abdominal Surgery.*—The list comprises seventeen cases, eight being operations for the removal of the uterine appendages, seven for the removal of ovarian and parovarian cysts, one of vaginal hysterectomy, and one for the incision and drainage of a pelvic monocyst. Four of the first set of cases were apparently cured, two 'nervous' cases are still under observation, one was not materially relieved until after the shortening of the round ligaments for retroversion. In another case each tube contained at least four ounces of pus, and miliary tuberculosis was present on the peritoneum in the region of the appendages. Of the seven ovariotomies, four were for ovarian and three for parovarian cysts. The latter were easily removed, but two of the former presented almost insuperable difficulties. The vaginal hysterectomy was for sarcoma, and the patient did well.

1003. *De la Touche on the Use of Subcutaneous Injections of Antipyrin and Cocaine during Labour.*—Having been called to a first labour in a woman, aged 24, the author found her in a violent state of excitement. The pains were strong, and the patient's cries were phenomenal. He prepared a solution of 15 grains of antipyrin and a fifth of a grain of cocaine in half a drachm of distilled water, which he injected at intervals into the abdominal walls to the extent of seven grains of antipyrin and one-tenth grain of cocaine. The patient at once became calm and the pains were assuaged, though the expulsive efforts continued as before. Delivery was normal. He commends this means of attenuating the pain, as free from the risks of chloroform.

1004. *Polaillon on the Danger of Washing the Peritoneum in Laparotomy.*—M. Polaillon brought forward a case in which the patient had died from syncope while the peritoneum was being cleansed during an ovariotomy. He is inclined to attribute the result largely to the reflex action of the hot water on the inferior surface of the diaphragm, and considers that irrigation of the peritoneal cavity is dangerous when the water gets into the upper region of the abdomen, and especially when it comes into contact with the diaphragm.

1005. *Stevens on the Influence of Morphine on Menstruation.*—For a number of years the author has had abundant opportunities for observation in a village where there is an institution for the treatment of morphine *habituées*. He found that women who had been addicted to the morphine habit for some time—say from one to three years—uniformly suffered from an entire arrest of menstruation. Under treatment the function was speedily re-established, and proceeded in a normal manner.

1006. *Kollock on the Eyes at Puberty.*—The author gives several cases in which eye-troubles coincided with the advent of puberty, and passed off when the menstrual function was properly established. A. B., 15 years of age, suffered from pain and general dis-

comfort in using her eyes; there was conjunctivitis, and the optic discs were seen to be hyperæmic. At the next visit menstruation had begun, and the condition of the eyes had markedly improved. Another case was that of a girl of 17, with a patch of retino-choroiditis in the right eye, and slight inflammatory exudation in the same region in the left eye. A month after menstruation commenced, vision had become normal in the left, and nearly so in the right. M. I. M., aged 13, was obliged to leave school because her sight gave way. Glasses were fitted, but no particular improvement took place until menstruation set in some months later, when her discomfort passed off as if by magic. Menstruation not recurring, the same train of symptoms recurred. This seemed unquestionably to be a case of amblyopia from suppression. The percentage of cases of retino-choroiditis occurring at or near the age of puberty in girls is significant, no such percentage being observed in boys.

1007. *Buckmaster on a Case of Extra-uterine Pregnancy; Embryo destroyed by a 20-Milliampère Current without Interruptions.*—The patient was an Englishwoman, 29 years of age, with the following history: She had been married four years; had one miscarriage two years ago, and has a child three years of age. Her menstrual periods recur regularly, and have always been plentiful. She was troubled with dysmenorrhœa previous to her marriage, but since then has been free from pain. In the previous October the patient changed her residence, and menstruated during the latter part of that month. She did not menstruate the following month (November), and thought she was pregnant. She had never passed over a period except when *enceinte*, and was much troubled with nausea and bladder irritation, symptoms she had experienced previously only when bearing child. On Dec. 26 she suddenly collapsed, and appeared to be dying. The face was ex-sanguine, and the pulse feeble and intermittent; abdominal pain. She rallied towards evening, but the next day the symptoms of pain and shock recurred, and again on the 28th, though with less severity than before. On Jan. 12 there was a recurrence of these fainting fits, also on Jan. 13 and 14. Dr. Skene saw the patient, who had been rapidly increasing in size, on Feb. 14, and found the lower part of the abdomen enlarged. The right iliac region was the most prominent, and there was slight tenderness on touch. Dulness on percussion from the right ilium across the lower part of the abdomen and upward to somewhat more than half the distance to the umbilicus. On the left side the dulness did not extend upward more than two inches. An ill-defined mass, elastic to the touch, was distinctly traceable on the right side. Vaginal examination showed that the uterus was crowded forward towards the pubes, and that it was somewhat enlarged and softened. Douglas's pouch was occupied by an elastic mass, in which fluctuation could be detected, and which felt not unlike a small ovarian cyst, and seemed to be part of the tumour felt in the right iliac region, from which the uterus appeared free. The diagnosis was between an ovarian cyst fixed on the right side and an extra-uterine pregnancy. Taking the physical signs with the clinical symptoms, a diagnosis of the latter condition was made. The general impression left on the mind of the examiner was that, without doubt, it was a case of extra-uterine pregnancy. Dr. Buckmaster was then called in to destroy the fœtus by means of the electric current. He determined to use the constant current, and the current was gradually increased by means of a rheostat until a strength of 20 milliampères was reached. No attempt to go further than this was made, as the patient felt some pain. After maintaining the current for ten minutes it was gradually decreased. The patient experienced no shock. For the abdominal electrode was used a large *plaque* of clay with sixty-four square inches of contact; the vaginal electrode was of steel covered with wet absorbent cotton. Six days after the first treatment the patient was again seen and her physical condition found to be much improved. The appetite had returned and the abdominal circumference had markedly decreased. The physical examination was very satisfactory. The cyst seemed to have lost much of its fluid contents. He felt quite sure that the child was dead, but as the thorough examination started up the old pelvic pain, he made another electrical application. The third, and, subsequently, three more applications were made for the relief of this pain, at intervals of about six days. None proved so efficacious as the first. At the third treatment the measurement around the abdomen had increased about an inch, and six days later was half an inch more, but after this, the circumference measurement steadily decreased. Towards the end of February and also at the end of March, the patient menstruated. The patient was seen three months after the first treatment and was in very good health. A hard mass could still be felt by making a vaginal examination, and there was a slight tenderness about it.

1008. *Grandin on the Use of Antipyrin During Labour.*—Dr. Grandin was led to try the effect of antipyrin in controlling the pain of labour from witnessing its efficacy in the treatment of dysmenorrhœa and other neurotic affections. He used it during the first stage of labour and the results were very gratifying. He gives 15 grains, well diluted in some stimulant and aromatic vehicle, repeating the dose in an hour. Two hours after the second dose the patient is given another 10 grains and so on every two hours if needed. He asserts that the first stage of labour may be rendered practically painless. ALFRED S. GUBB.

1009. *Boriakovsky and Rein on Castration in Hystero-Epilepsy.* — Dr. Afanasy G. Boriakovsky, of Kïev, reports a very instructive instance (*Proceedings of the Kïev Obstetrical and Gynæcological Society*, 1887, vol. i., p. 45, and 1888, vol. ii., pp. 1 and 71) of severe hystero-epilepsy treated and greatly relieved by removal of the uterine appendages. The patient, a normally-built, somewhat pale and meagre Jewish woman, aged 27, a merchant's wife, with a good family history, was admitted to Professor Gheorg E. Rein's clinic after having been vainly treated for years by a number of eminent practitioners both at home and abroad (including Pirogoff, Krassowski, Matvëëff, Motchütkovsky, Charcot, Schroeder, Billroth, Braun, Oppoltzer, &c., &c.). She had been quite healthy up to 17. At that time she happened to lose her bridegroom, who had suddenly died from an unknown cause, a couple of moments before the appointed marriage ceremony. Under the influence of this heavy blow she lost her appetite and sleep, and retired from the world to bitter cry all days and nights long. Sometimes the paroxysms of her grief rose to a violent mad excitement, with loud screams, alternating with deep swoons. At 18 she

was compelled by her parents to marry an elderly man, from whom she ran away on the third day after the marriage, no coition having taken place. Shortly afterwards the patient fell ill with some grave cerebral disease ('inflammation of the brain') ushered by violent headaches, and accompanied by unconsciousness and paraplegia. During her reconvalescence from the disease there supervened, at first, slight hysterical fits, and, later on, convulsive seizures, with loss of consciousness, which commenced to occur two or three times a week, lasting each time about two minutes. At 21, after her having been indulging in sexual excesses (six or seven coitions nightly, up to fainting) for some time, she was admitted to a hospital on account of an obstinate profuse flooding, anorexia, hypogastric pain, painful micturition, frequent deep swoons, and hystero-epileptic fits. At 22, she had amenorrhœa of six months' standing. At 24 she became pregnant, the pregnancy being accompanied by vomitings, perverted taste sensations, and three successive attacks of lethargy, lasting from five to twenty-one days. The hystero-epileptic fits, however, were absent up to her delivery at full term (the infant dying from convulsions shortly after its birth), when they reappeared with the same intensity as before the conception, and continued to occur three or four times weekly, in spite of any treatment (which, in fact, had been incessant for about eight years, and included even a 'fantom castration'). When at last admitted to Professor Rein's clinic, the woman was suffering, beside the fits, from painful and irregular menstruation, loss of appetite, sleeplessness, occasional nausea and vomitings, constipation alternating with diarrhœa, painful micturition alternating now with retention and then with incontinence of urine, anteflexion of the womb, general irritability, headache, lumbar and left inguinal pain, weakness and thermic and pathic anæsthesia of the right limbs, and an extreme increase of sexual appetite. The left ovary was found to be somewhat enlarged and tender, the right one displaced downwards. The fits could be cut short by pressure over the ovarian regions, though on one occasion the pressure gave rise to a fit. Taking into consideration—*a*, utterly unsuccessful results of a prolonged local and general therapeutical treatment of all possible kinds; *b*. the fact that the patient's neurosis was evidently kept up by a morbid ovarian irritation; and (*c*) the patient's ardent desire to get rid of her intolerable diseased condition by means of a surgical treatment, Professor Rein made abdominal section and removed the ovaries and oviducts (under strict antiseptic precautions). The right tube was found adherent with its free extremity to deeper pelvic structures, while both of the ovaries proved to be affected with the so-called 'small cystic degeneration' (each contained about ten or fifteen smooth-walled cysts measuring about 1 centimètre in diameter, and filled with a gruel-like matter). The woman speedily recovered after the operation without any fever. On the third day there appeared menstruation of six days' duration (the preceding had occurred two weeks before), which was followed by an attack of hæmoptysis. The fits recurred on the thirteenth, seventeenth, and eighteenth day, and continued to come about once weekly for some time after her discharge; but later on they commenced to visit her ever more rarely, and ultimately ceased altogether. When examined about a twelvemonth after the castration, she was wholly free from any fits and assured that she 'felt now a thousand times better than before the operation,' though there were still present weakness of the right limbs and some pain and difficulty on passing urine. Menstruation returned only once (several months after the castration) to last two days. The sexual desire remained still very intense; in fact, she is occasionally induced to take various anti-aphrodisiac means. The womb was found greatly diminished in all dimensions, its length having decreased from 8 to 5·6 centimètres. The breasts, however, remained strongly developed. Both Professor Rein and Dr. Boriakovsky firmly believe that castration represents a legitimate means of treatment in certain cases of hystero-epilepsy, resembling, in general, the authors' case. This is the first Russian case of the kind [and the fourth Russian case of castration generally. The preceding three were published, one in the *Vratch*, No. 12, 1885, by Professor A. I. Lebedeff, of St. Petersburg, who had removed the uterine appendages for fibromyoma; and two, *Ibid.*, Nos. 13 and 42, by Professor V. V. Sütügin, of Moscow, who had performed the operation for chronic pelvic peritonitis and hypertrophic salpingitis]. Shortly afterwards, Dr. A. A. Raküza, of Odessa, reported (*Ibid.*, vol. i., 1887, p. 56) his case of castration for hystero-epilepsy, referring to a young Jewish girl with 'small cystic degeneration' of the ovaries. The results were said to be 'favourable' at the date of the communication (a week after the operation).

V. Idelson, M.D.

1010. *Warden on a Fatal Case of Labour.*—In the *Kansas City Med. Index*, August 1888, p. 312, Dr. Warden records the following case. One bitter cold night he was called some miles into the country to a woman who had been in labour for some hours; on arriving he found she had been in convulsions for hours, the os very rigid and only dilated to the size of a silver dollar. He had no chloroform. The woman's limbs were almost frozen, and the house in which she lay was only a rough sort of box through which the snow and sleet came pouring in. A messenger was sent for help and for chloroform, but owing to the bad weather he never reached his destination and was obliged to seek shelter at the nearest farmhouse. Dr. Warden first gave the patient a hypodermic injection of morphine, and then bled her as the convulsions grew worse every minute. An attempt was then made to dilate the os with the fingers but without success. After some hours one blade of the forceps was introduced, but it was impossible to introduce the other, and towards morning the woman died undelivered and partially frozen. The injection of morphine seemed to have no relaxing effect on the rigidity of the os, and the bleeding did not exert the slightest influence upon the eclampsia. Richard Neale, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

1011. Fick, Dr. A. Eugen.—On a Contact-Lens. (*Archives of Ophthal.*, June 1888.)

1012. Weiss, Dr. Leopold.—On the Relation between the Form of the Orbit and Myopia. (*Klin. Monatsb.*, September 1888.)

Art. 1011. *Fick on a Contact-Lens.*—As far as we are aware this is a suggestion on entirely new lines for

the correction of irregular astigmatism, and although we shall presently call attention to several obstacles which we fear will seriously limit its practical adoption, it is impossible not to recognise its theoretical interest, or to fail to see that it might sometimes prove of diagnostic value. The difficulty of correcting irregular astigmatism is well known. It is true that a certain measure of success has been obtained in various ways, notably by the use of hyperbolic and conical lenses in conical cornea. But the difficulty and expense of constructing such lenses are serious drawbacks, and their usefulness is much impaired by the fact that they only correct the defect as long as the axis of the lens coincides with the visual axis; thus the field is much limited, and the net result, therefore, often not much better than that afforded by a stenoptic apparatus. Dr. Fick's so-called 'contact-lens' eliminates the action of the cornea altogether, and in fact substitutes an artificial for the natural cornea as far as refraction is concerned. The principle of the instrument is the immersion of the cornea in a fluid having the same index of refraction as itself and the aqueous, the fluid being bounded in front by a thin convex layer of glass with parallel surfaces, which may have any required curvature. It is evident that this will then become the anterior refracting surface, for the cornea lying between two fluids, having its own index of refraction, will cease to have any action upon the course of the rays passing through it. The contact-lens—or glass cornea as we prefer to call it—rests upon the sclerotic by its margin, and follows the eye in all its movements; the space between it and the natural cornea is filled with fluid, which is dropped in with a pipette while the upper edge of the glass is held away from the cornea with a small hook. Experiments were first made upon rabbits, and it was found that only moderate conjunctival injection was caused after wearing the sphere for six to eight hours, but that in that time the fluid became turbid, and the corneal epithelium slightly clouded. The milkiness of the fluid was due to the admixture of fat globules and small particles of epithelium, and the cloudiness of the cornea was due to epithelial changes, its substance being normal. The injection and cloudiness disappeared soon after the removal of the glass, and after a few experiments the eyes became more tolerant and no injection occurred. The changes in the cornea only occurred when fluid was used, unless the sphere touched the cornea at any point, when some cloudiness appeared in the adjacent substance. Experiments were made with the view of finding a fluid of the requisite specific gravity which should be non-irritating, and it was found that a sterilised two per cent. solution of grape sugar was the most satisfactory. This was borne by a rabbit's eye for eight or ten hours without any clouding or injection being caused. The author then experimented on himself, and found that he could wear the glass and fluid for two hours without any discomfort except a slight excess of lacrimation, which, however, was not sufficient to run down the cheek. The glasses used had a radius of curvature of eight millimètres, and formed an arc of which the cord measured seven millimètres; they rested on a band of artificial sclerotic three millimètres wide, which was part of a sphere having a radius of fifteen millimètres. The average weight was 0·5 grammes. As Dr. Fick has so far had but little opportunity of employing the instrument on patients we have probably yet to learn some of the practical difficulties. In only one of the six cases in which he employed it was there any very great improvement in vision (from $\frac{1}{36}$ to $\frac{1}{6}$); in the others it was insignificant, and in this case the use of the glass was not persevered with, since the other eye had good vision. All the cases were, however, unsatisfactory ones for first experiments, since there were in all considerable opacity of the cornea; no case of irregular astigmatism in which the cornea was clear was experimented on, yet it is for such that the treatment would seem best adapted. It is to be feared that the practical difficulties in the way of any extensive application of the 'contact-lens' will prove insuperable. The manipulation necessary to adjust the glass shell and to introduce the fluid must be so delicate that few patients would be able either to perform it themselves or to entrust it to a friend, and notwithstanding the ease with which the glasses remained on the rabbits' eyes it is difficult to believe that they would not readily become displaced by any sudden and violent movement. The impotent condition of young Barnacle with his eyeglass dropping into his soup would be nothing compared with the state of a man who has sneezed off both his corneæ and was unable to replace them. Some of these difficulties might perhaps be overcome if the shell could be filled with some solid substance, such as sterilised gelatine, which might be softened by heat before being applied. If this should be found feasible we see no reason why a patient should not carry a supply of contact-lenses and adjust them for himself. At any rate Dr. Fick has attempted to remedy a condition whose treatment has hitherto been exceedingly unsatisfactory, and as his method rests on a sound theoretical basis it is to be hoped that some way may be found of obviating the practical difficulties.

1012. *Weiss on the Relation between the Form of the Orbit and Myopia.*—In the August number of the London Medical Recorder we gave an abstract of Professor Stilling's recent work on this subject. It will be remembered that from a large number of measurements made on the living subject he came to the conclusion that a diminution, actual or relative, in the vertical diameter of the orifice of the orbit was one of the causes of myopia, and that it acted by increasing the pressure upon the eyeball exercised by the oblique muscles. The present contribution of Dr. Weiss is of importance, because since the publication of his work (*Beiträge zur Anatomie der Orbita*, 1888) he is an acknowledged authority on the form of the orbit. For a long time past Dr. Weiss has been investigating the relation of the form of the cranium to that of the orbit, and making a large number of measurements with this object; but he did not consider that he had obtained sufficient results to justify publication, although they afford him material for criticising Stilling's conclusions. At the outset he points out that the measurement by compasses on the living subject is, as Stilling himself admits, only approximate; and he considers it especially unreliable for the transverse diameter, even those who are experienced in taking the measurements sometimes obtaining different results from the same subject. While admitting that with a certain disposition of the tendon of the superior oblique, the pressure it exercises upon the globe will depend on the height of the trochlea, he points out that the insertion and direction of the oblique tendons vary much, and

that these variations depend, at any rate in part, upon the form and prominence of the globe; moreover, that Stilling's measurements of the vertical meridian of the orbit are of little or no value as showing the position of the trochlea, since this lies on a different and variable level from the highest point of the orbital orifice. Weiss does not give his measurements in detail, but says that he has met with frequent exceptions to Stilling's rule, having often seen an absolutely and relatively high orbit in high myopia, and the reverse in high hypermetropia. He, however, is opposed to Stilling's conclusions not so much on these grounds as on the results he obtained from the examination of anisometropes. He argues that if Stilling's theory be true, when there is myopia on one side only there should be a marked difference in the form of the orbit, since the eyes in other respects have been subjected to identical conditions. This, however, he has not found to be the case. It appears to us that this argument is worthless, unless it can be shown that the monocular myopia has developed during the period of growth. We are not aware of any statistics bearing on this, but think it most probable that in these cases the difference in the refraction of the two eyes is congenital. It would be difficult to ascertain this with any certainty except in a few cases; but it would be quite easy to ascertain whether in such cases the myopia is due to a difference in the corneal curvature or to the form of the globe, and until we know this it is useless to argue from such imperfect data. W. Adams Frost.

DISEASES OF CHILDREN.

RECENT PAPERS.

1013. Hamilton.—On a Case of Lipomatosis Neurotica. (*Archives of Pediatrics*, vol. v., No. 55.)

1014. Lovett.—On Sixty Cases of Cerebral Paralysis in Children. (*Boston Medical and Surgical Journal*, vol. cxviii., No. 26.)

1015. Jacobi.—The Therapeutics of Infancy and Childhood. (*Archives of Pediatrics*, vol. v., No. 8.)

1016. Baculo.—On a Case of 'Duplicated' Quotidian Ague in a Child. (*La Medicina Contemporanea*, July 1888.)

1017. Manby.—On Sulphurous Acid Fumigation in Whooping-cough. (*Practitioner*, August 1888.)

1018. Gibb.—On a Case of Remittent Fever in a Child. (*Glasgow Med. Jour.*, September 1888.)

1019. Robertson.—On a Fatal Case of Obstruction of the Bowels in a Child. (*Glasgow Med. Jour.*, September 1888.)

Art. 1013. *Hamilton on a Case of Lipomatosis Neurotica.*—The patient, the offspring of Mormon parents, was a boy, aged seven years, some of whose near relations had had trophic disturbances of the skin. When four years old he had an attack of whooping-cough, followed by ague. He had not fully recovered in February 1884, when it was noticed that his face looked thin and in marked contrast with his legs, which were exceptionally plump. When first seen by the author in August 1886, the child presented the appearance of a well-marked case of pseudo-hypertrophic paralysis. He waddled, but there was no lordosis, and though weak in rising he was not obliged to assist himself by placing his hands on his thighs. The tendon reflexes were evoked without much difficulty. The circulation was defective, and he complained of subjective cold. His face was very striking. It was pinched and of a muddy colour; the lips were thin and drawn and the eyeballs were prominent. Sensibility unaffected; no bladder trouble. Faradaic irritability fair; no reaction of degeneration. The boy was seen again in February 1887, but presented little or no change. There was some weakness of grasp and of the legs, the reflexes were good, and there was no ankle clonus. The facial muscles gave the reaction of degeneration. Intellectually, the boy was precocious in some things, but very backward in others. His disposition was mischievous, impish, and often violent. [The paper, which is of great value from the extreme rarity of the disease, is accompanied by a drawing of the patient.—*Rep.*]

1014. *Lovett on Sixty Cases of Cerebral Paralysis in Children.*—These patients were observed during the four years ending January last. Twenty-six of them were cases of hemiplegia—half of the right side and half of the left. The ages ranged from 18 months to 14 years, and the sexes were about evenly distributed. About two-thirds of them were of the simple adult type, but the remainder combined with the hemiplegia a more or less advanced spastic paralysis of both legs. When the disease had lasted some time there was some bone shortening in addition to the muscular atrophy. One case showed a shortening of two inches in the length of the arm after a paralysis of seven years' standing, and three others showed a shortening of one inch. The muscular atrophy was comparatively slight and nothing like so marked as in infantile spinal paralysis. The arm was in all cases affected more severely than the leg. Facial paralysis had been present in at least half the cases, and strabismus existed at the time of observation in more than half. Athetosis was noted in only two cases, but the intellect was so much affected that only six could be accounted of average intelligence, and seven were idiotic. Aphasia was present in four cases of left and in three of right hemiplegia. With a view to discovering the cause of the paralysis, the mothers were questioned as to the severity of the labour. In eight, the labour had been normal; in four, 'very hard'; in seven, instruments were used—two of these still showing a depression in the skull on the side opposite the paralysis; and in the remainder, no information could be obtained upon this point. Of the twelve cases of spastic paralysis mentioned later on, nine were born after an easy labour. Of the twenty-six hemiplegia cases, seven were noted immediately after birth, five in the first year and twelve in the second year. One only followed upon any of the exanthemata—diphtheria. Sixteen of the sixty cases were the subjects of bilateral spastic paralysis, in addition to the seven described above, where it complicated hemiplegia. The ages ranged from two to twelve years. In eight it was noticed immediately after birth, in one of the others it ensued upon a fall of 36 feet, in two it followed upon 'slow fever,' and in the remainder no information was forthcoming. The intellect was very greatly affected, six being low-grade idiots, three very stupid, two backward and mischievous, and one apparently bright, though the mother said the child had 'no sense'; in four cases the notes were

defective. Seven were completely aphasic. Twelve were unable to walk—five of these having the cross-legged deformity due to spasm of the adductors. In seven, the hands were also impaired. Strabismus was noted nine times. Knee jerk was increased in all, and ankle clonus was elicited in a few. The palate was high in a small proportion of the cases. The remaining eighteen cases were not susceptible of much classification; nearly all were idiotic.

1015. *Jacobi on the Therapeutics of Infancy and Childhood.*—The present number treats of rachitis. This is sometimes the result of mitigated syphilis in the parents. Where previous children have been rachitic from this cause, the mother at the next pregnancy should undergo a long mercurial course. Rachitis due to disorder of the digestive functions demands the correction of the latter. The gastric catarrh of rachitis is pre-eminently acid, so that the stomach requires to be neutralised before and between meals, and if there be in addition excessive flatulency, salicylate of bismuth, resorcin, or animal carbon with aromatics should be given. When the secretions of the stomach are merely insufficient, the addition of chloride of sodium in proper quantities will facilitate the formation of hydrochloric acid. In more obstinate cases, pepsin and very dilute hydrochloric acid itself, with bitter tonics and dilute alcohol, will be required. But a suitable food is always the great indication. Cod-liver oil has a very favourable effect. It is better not to trust to its compounds; but if the bowels should be relaxed by its use the addition of a little bismuth or phosphate of lime will correct this. Phosphorus is in large doses a tissue destroyer; in small doses a tissue builder. It is of especial value in cases of craniotabes, and in acute rachitis. The dose is from $\frac{1}{200}$ to $\frac{1}{150}$ of a grain three times a day, and the best form is the olium phosphoratum of the (U.S.) pharmacopœia. Laryngismus stridulus is almost always associated with craniotabes, and is caused by its meningeal and encephalic results. It requires the general treatment of rickets with, when first seen, sedatives, as mixed bromides, valerian, or codeia, and great attention to the bowels. The attack can be cut short by shaking the infant, or by slapping the face with a cloth. The rachitical disorders of respiration owe their origin to several causes. First, the arteries are very large, and by thus lowering the blood-pressure, favour congestion, and catarrh; secondly, the chest is contracted; and thirdly, the glands are commonly enlarged. In treating these cases, the sluggish circulation must be borne in mind, depressing expectorants must be therefore avoided, and digitalis, caffeine, alcohol, and carbonate of ammonia will be indicated. Rachitical constipation is mostly due to weakness of the abdominal muscles, and of the muscular coat of the intestines; purgatives must therefore be avoided except where there is an accumulation of fæces, when an occasional dose of calomel will be beneficial. If an acid gastric catarrh accompanies the intestinal weakness, calcined magnesia in doses of a grain upon an empty stomach will neutralise the acidity and procure a motion. Gentle massage, tepid water enemas, and minute doses ($\frac{1}{200}$ gr.) of strychnia will also assist matters. Pure cow's milk is contra-indicated. The artificial food should contain plenty of salt and sugar, and some oatmeal. Ralph W. Leftwich, M.D.

1016. *Baculo on a Case of 'Duplicated' Quotidian Ague in a Child.*—The case was observed in the clinic of Professor De Bonis, at Naples. The child was six years old, and no history whatever of the illness could be obtained. It was well developed and well nourished, but the colour of the skin was yellowish and almost jaundiced. The child was semi-comatose, with a temperature of 106°·1, dry skin, and rapid pulse, but no convulsions or paralysis. There were no physical signs of importance in the thorax, but the abdomen was tumid, and a very greatly enlarged spleen could be easily felt. Ice was applied to the head, cold cloths to the abdomen, and a subcutaneous injection of 7 grains of bisulphate of quinine was given at once; and in the evening another injection of a similar quantity. This was continued for five days, and on the third the coma disappeared. On the fifth day the temperature varied between normal and 101°. For the next two days it gradually rose after the cessation of the subcutaneous injections, and they were consequently commenced again and continued once daily for three days. The child eventually got quite well, and after some months the enlargement of the spleen disappeared. On inspecting the temperature chart, which is published with the case, it is seen that there are two distinct and considerable rises of temperature each day, one in the morning and the other in the afternoon; but the temperature does not fall to the normal in the intervals. It is not very uncommon in severe cases of quotidian ague in adults to have the paroxysm repeated once or twice, or even more times in each day, but this condition is very rare in children. In such cases the first and third stages are apt to be incomplete, and the temperature does not always fall to the normal in the intervals. This is especially so in children. In the case related the cold stage and the sweating stage were but little marked, and the temperature remained elevated for many days without reaching the normal. Griesinger and Gerhardt have each described malarial attacks in children, but not cases where there has been more than one paroxysm daily. The absence of any history of the illness makes it impossible to say whether the case was quotidian from the commencement. It appears certain, however, that 'duplicated' paroxysms never arise primarily, but supervene in cases of long standing or of great severity. The author also calls attention to the largeness of the dose of quinine given and attributes to that the successful issue of the case. Usually for children of this age 4 or 5 grains are considered a maximum dose by the mouth, and about a half or one-third of that by subcutaneous injection. This case, however, received 7 grains subcutaneously twice a day for several days.

H. Handford, M.D.

1017. *Manby on Sulphurous Acid Fumigation in Whooping-cough.* — In the *Practitioner*, August 1888, p. 120, Mr. Manby gives his experience of the treatment of whooping-cough in children by means of fumigation by sulphur. The method is described as follows:—The children are in the morning put into clean clothes and removed elsewhere. All their clothes, toys, &c., are brought into their bedroom, and sulphur is burnt upon a few live coals in the middle of the room. The fire is allowed to remain in the room for five hours, and then the windows and doors are thrown open. The child sleeps in the room the same evening. About 25 grammes of sulphur to every cubic mètre should be burnt. The additional precaution of having the dayroom fumigated during the night, ensured the children living entirely in an atmosphere of dilute sulphurous acid.

At the end of a week the process may be repeated. There is no doubt that this method produces a rapid improvement in the symptoms, the cough is lessened in frequency, expectoration is facilitated, the paroxysms are less severe, and the sickness seldom if ever returns. In a fortnight the children are practically well.

1018. *Gibb on a Case of Remittent Fever in a Child.*—In the *Glasgow Med. Jour.*, September 1888, p. 212, Mr. Gibbs, M.B., records the case of a child, aged 2 years and 9 months, suffering from remittent fever in Zanzibar. When first seen the patient looked very anæmic and emaciated, the temperature 102°·4 F., the skin dry, tongue covered with a thick white fur, and the pulse quick and soft. A small dose of calomel was given, which acted efficiently. A dose of five grains of quinine was then given, though the parents stated that quinine never agreed with the child. Two hours later the temperature was 104°·4 F. A hot bath caused free perspiration, and soon the temperature fell to 103° F. A mixture was then given every three hours, containing five grains of salicylate of sodium, with three grains of nitrate of potassium; this was continued for two days, the temperature ranging from 101° F. to 103° F. On the morning of the fourth day the temperature was 101° F., and the author gave another five grains of quinine; two hours after the temperature had risen to 104°. The mixture containing the salicylate of soda was repeated, and gradually the temperature fell to 101° F. Mr. Gibbs then tried the effect of two minims of liq. arsenicalis every four hours, but without success; and on again resorting to the salicylate, the temperature soon fell to 99° F. At this stage another five grains of quinine were given, causing the temperature to rise to 105° F. within an hour, and the child had convulsions. An enema was given, with a hot bath for a quarter of an hour. The salicylate mixture was resumed, together with six grains of potassium bromide; the temperature gradually fell, and the convulsions ceased. Next day the patient was seen in consultation with another medical man, who ordered the quinine to be given frequently in small doses, but even in this way the temperature immediately commenced rising, and the salicylate of sodium was again substituted with the best results. In many cases of remittent fever the author has found salicylate of sodium reduces the temperature far better than the quinine; and he adds that he has not obtained any good results from antipyrin.

1019. *Robertson on a Fatal Case of Obstruction of the Bowels in a Child.*—In the *Glasgow Med. Jour.*, September 1888, p. 215, Dr. Robertson details the particulars of a fatal case of obstruction in a child aged 4 years. In April 1888 he was attended by the author on account of severe diarrhœa, and, on examining the abdomen, it was discovered that he was suffering from inflamed intestinal glands, probably strumous. In a few weeks, however, he was quite well, and was sent to school, but had only been there three weeks when he caught a severe cold, which developed alarming symptoms on the fourth day, when he was found suffering from severe 'shock,' with frequent vomiting, and a dull listless expression. On pressing the abdomen in the left inguinal region there was some tenderness, but the pulse and temperature were normal. For some days the vomiting continued, and the bowels were not relieved, in spite of medicines and enemata; the stomach then began to be tender and much distended. The patient was extremely restless and very prostrate; soon the vomiting became stercoraceous, and opium had to be given to relieve pain and produce sleep. On the fourteenth day death closed the scene. On *post mortem* examination, there was found evidence of severe and continued peritonitis. The large intestine was quite empty of fæces, but was distended with the fluids used as enemata. The small intestines for about a foot beyond the ileo-cæcal valve was quite empty and narrowed, the inner surfaces of the bowel lying in contact with one another; then the place of obstruction was reached, and was due to firm fibrous-like bands of cicatricial omentum, twining round the bowel in front and behind, so as to appear as if tied by a cord. The gut was so obstructed that the bowel contents could not be pressed through from above into the obstructed part. Such a case had no chance of cure without an operation; this the parents refused from the commencement.

RICHARD NEALE, M.D.

REVIEWS.

ARTICLE 1020.

On the Relief of Dangerous and Excessive Tympanites by Puncture of the Abdomen. By J. W. OGLE, M.A., M.D., F.R.C.P. J. & A. Churchill. 1888.

DR. OGLE is so well known as an accomplished physician and pathologist that the profession will welcome this 'memoir' upon so practical and important a subject, and his sound judgment in its favour will be all the more acceptable as it appears to be formed upon mature deliberation, and to be rather opposed to the practice of his earlier days. The title-page of the book contains an extract from the letter of a well-known living physician, which seems to indicate the feeling of many who have not dared to employ the means he now urges, in the importance of and the benefit of which he fully concurs. 'I could never bring my mind to the point of actually ordering the operation to be done. But I now wish I had done so in some cases, for I have subsequently found, from the experience of others, that it is a safe one, and may give immense relief.'

The substance of this memoir appeared as a communication to the *Lancet* of July 1887, and is now reproduced with very considerable additions. The author commences with some introductory remarks upon the importance of the subject, and follows with a learned and exhaustive record of observations from ancient and modern authorities, which are given in a scholarly and attractive form, such as might be expected of the author. And he has not been content with book and pamphlet references, but has taken the opinion and experience of living surgeons and physicians, and gives the results of oral and written communications with them, which will be read with great interest.

No work on the subject would be complete without reference to the operation as it is practised on the lower animals, and he gives illustrations from comparative pathology, and from the expressed and written opinions of standard authorities on the subject.

The conclusions at which he arrives are now briefly given, but they are decided. He considers that the 'joint force and full result' of his references to standard authorities and the illustrative cases

supplied to him by living practical physicians and surgeons indicate the great good which may be accomplished by the expedient, when timely adopted, of puncturing the abdomen with a fine trocar, in excessive tympanites. The weight of evidence, the preponderance of testimony is in favour of and warrants this operative procedure. In addition to immediate solace and relief from distress, it has been shown that *permanent good* may arise from the operation by reason of the fact that removal of the pent-up gas in many cases enables the atonic or paralysed intestinal walls to contract upon and therefore evacuate their contents. Our author, too, points out that relief may also be obtained mechanically in cases of obstruction by taking off the pressure above a stopper-like closure of the tube, either from nodular growth or folding of the gut.

As to the method of operating, he leaves this to the judgment of experienced surgeons, but considers that it may be summarised as 'the absolute necessity of using a very fine instrument, previously disinfected,' and he urges the importance of not delaying the operation too long. In most cases, probably where the operation is at all requisite or advisable, a Fabian policy is a mischievous one.

In an appendix he gives some further notes and references, and discusses the manner in which abdominal distension may affect the respiration and circulation.

That some living authorities are still opposed to this line of treatment is an indication of the importance and appropriateness of the inquiry by such a clear and judicious mind as the author's, and the memoir will prove of great service to those who are likely to have the care of such cases. In this respect both the general practitioner and the hospital physician or surgeon will find the book of great practical value, and we shall be surprised if tapping the intestine in cases of excessive tympanites is not more often practised, and thereby much distress alleviated. The author is to be cordially thanked and congratulated upon the appearance of this small but useful and scholarly work.

Article 1021.

The Diagnosis and Treatment of Diseases of the Rectum. By William Allingham, F.R.C.S. Fifth Edition. By H. W. Allingham, F.R.C.S. London: J. & A. Churchill. 1888.

This work is so well appreciated that it has already reached its fifth edition, at a time when many rivals have been presented to the public, and these we have had occasion to notice in this journal—Mr. Harrison Cripps (February 1884), Dr. Bell (December 1887), Mr. Cooper (October 1887). And besides the present volume there are also new editions of Mr. Curling's and Mr. Henry Smith's, so that the practitioner has a large selection of modern works on this special subject.

Mr. Allingham's work has been edited and revised by his son, and claims to have much additional new matter in it, besides having been rearranged and every part having been considerably added to. The original author, however, has had the essentially practical character of the book adhered to, and anatomy and pathology are but slightly introduced—only when the author considers them necessary—to assist in diagnosis and treatment. New chapters have been introduced by the editor on 'Incontinence of Fæces,' 'Excision of the Rectum,' and 'Inguinal and Lumbar Colotomy.'

The first thing which strikes the reader is the essentially practical and personal character of the work, and this has certainly always been a feature of it from the time of its first appearance, and we should not wish to see altered. It has made the work what it is felt to be—a practitioner's book, and a help to the hospital surgeon, rather than a student's text-book. It is, therefore, not very surprising to find the first person singular rather prominent, and that the name of the editor largely figures in connection with so many modifications of ordinary operations. If the same plan were adopted in text-books of operative surgery, the index would be rather voluminous. However, we feel on reading the work that we are in the presence of a sound and able as well as bold surgeon, and that the subjects are treated thoroughly from a practical point of view, and it is this class of work that becomes most useful to the practitioner.

Looking now at the additions made to the present edition, we find a useful paper on Inguinal and Lumbar Colotomy, in which the editor's well-known advocacy of inguinal colotomy is strongly repeated, and we think that surgeons will be influenced by these views and make use of the operation in many cases in preference to the lumbar, but it is not claimed that it should supersede it. In the description of the operation it is not clearly stated in which inguinal region the operator is to proceed, though the author may think such indication unnecessary. The difficulties in the lumbar colotomy, due to peculiarities in the length of the meso-colon, and in the position of the intestine, are carefully and well given, and Mr. Treves's, as well as the editor's own observations are recorded. Great importance is attached, and with justice, to the formation of a well-marked spur between the openings into the ascending and descending portions of the gut in making an artificial anus, and the difficulty of making sure at first which opening leads to the upper part of the gut, is recognised and acted upon. We may notice here that the author does not lay much stress upon the good influence of colotomy in giving nature an opportunity of curing some of the ulcerative forms of stricture by the local rest which results from it. We have seen so much good both in this class of cases and also in other cases of obstruction from varying causes when the intestine is opened above, that we are pleased to find this special chapter upon the different forms of colotomy added in this edition.

Another new chapter on persistent constipation and its treatment is not so full or satisfactory, and does not throw much light on the subject.

We should have been glad to see some reference to imperforate anus and some of the other abnormalities, but recognise that this is intentionally excluded from the scope of this essentially practical work on diagnosis and treatment of rectal disease. Probably the same limitation accounts for an important omission—that of the development of these parts—which would help to explain the progress of disease as well as its localisation; and the still more marked omission of any definite account of the anatomy of the parts, except when some large operation is described involving anatomical structures.

Perhaps, for reference, one of the most important parts of a book is a good index, and in this

respect the book is not so satisfactory as could be wished. It would almost seem as if some pages had been omitted between 364 and 365, for the other parts of the index are very full.

We have pointed out some of the defects which appear to us to exist in this work, but are satisfied that it will maintain the author's high reputation in this branch of surgery, and will be recognised as a valuable aid to the practitioner and the surgeon. The new diagrams, which are many, are clear, and will render the work even more valuable, and the new chapters added are written in the same style as the original part of the book. There are few practitioners or surgeons who will not be glad of these works upon a subject so often coming under their notice, and often giving them much trouble.

W. W. Wagstaffe.

Article 1022.

Therapeutics: its Principles and Practice. By H. C. Wood, M.D., LL.D., Professor of Materia Medica, and Clinical Professor of Diseases of the Nervous System in the University of Pennsylvania. Seventh Edition. London: Smith, Elder, & Co. 1888.

This is the seventh edition of a work which is almost as well known in England as in the United States. It is, to quote the title page, 'a work on medical agencies, drugs, and poisons, with especial reference to the relations between physiology and clinical medicine.' As thus described, the work is just such as the intelligent practitioner desires to have. He requires, not too much science, but just science enough, and for the science to be of assistance its direct therapeutical bearings require to be given, freed from mere laboratory details. This has been the author's object from the commencement, but he has, this time, realised more completely and more satisfactorily his intent than in any previous edition. Indeed, the present volume differs in many and important respects from its predecessors, and is, to all intents and purposes, a new production. We can quite sympathise with the author in his plaintive cry that, although scarcely three years have elapsed since the appearance of the sixth edition, the preparation of the present edition necessitated the careful study of nearly six hundred memoirs. The fact that a vast amount of what is written is not only useless but even positively misleading, only renders the task of elimination the more fatiguing. Besides, the yearly increment of valuable additions to our knowledge of new medicinal agents and fresh applications of older remedies is in itself sufficiently formidable.

In order to bring the work more into harmony with his intentions, the author has thought it desirable to entirely change the plan of the book so far as the study of drugs is concerned, in addition to altering the sequence and re-writing many of the more important chapters. The result is that the present volume, notwithstanding all the condensation possible, comprises some two hundred pages more than its immediate predecessor.

Part I. deals with remedial measures and remedial methods which are not drugs, and has been made to include massage and the dietary of the sick; the treatment of systemic conditions—neurasthenia, corpulence, and lithiasis; cold as an antipyretic agent, and lastly, electricity in therapeutics. The chapter on cold as an antipyretic agent is a valuable *résumé* of the effects which may fairly be anticipated and the conditions in which they are indicated.

Division I. brings us to the consideration of drugs as systemic remedies, arranged under the head of their respective actions. Although this method is open to criticism (what method is not?) it offers so many advantages that the author's choice will probably meet with general approval. Drugs are broadly divided into nervines, cardiants, and nutriants, the latter being apparently a synonym for astringents. Cocaine is placed among the delerifacients, though, from a therapeutical point of view it might have been classed among the local anæsthetics had such a group been provided for.

Class II. deals with 'local remedies, *i.e.* remedies acting, or supposed to act, on particular organs or tissues; and Division II. winds up with the 'extraneous remedies,' including anthelmintics, digestants, absorbents, and disinfectants.

Every credit is due to the author for the care and impartiality shown in the selection and description of drugs of modern introduction. The only matter for criticism lies in questions of opinion which it is not within our province to discuss. The utmost trouble has evidently been taken to make the work complete and comprehensive, and it represents the present position of therapeutics as accurately as the most fastidious reader could desire. The reader, moreover, will appreciate the clear type, good paper, and cut edges which the publisher has provided for his comfort.

Alfred S. Gubb.

Article 1023.

The Diseases of the Chest. By Vincent D. Harris, M.D., F.R.C.P. Student's Guide Series. Churchill. 1888. Pp. 419.

The demand for much instruction in short time and small compass, to which the modern system of medical education is giving rise, has been met by the supply of various series of student's guides, notwithstanding the condemnation showered upon 'all short cuts and stuffing machines,' &c., by many of the older teachers.

The publishers have done wisely in placing the production of their 'little books' in competent hands. The work before us, the latest attempt to squeeze the quart of information into the pint pot provided by Messrs. Churchill, compares favourably with the previous volumes which have appeared in the same series. Dr. Harris has done his best for the students in the space allotted to him, and from intimate knowledge of their more immediate requirements has devoted much attention to the careful explanation of the physical conditions of the normal chest organs, and their alteration in disease. Shortly and concisely he considers in turn the various points, such as the phenomena of respiration and its disturbance by disease, the conditions of vascular tension, and all the other physiological problems which he has found by experience to be less easily comprehended by students. The quality of clear and lucid explanation is marked throughout each section of the work. The tabular form of demonstration is largely used, and, in respect of all theoretical matters, with excellent effect. As applied to practical descriptions, however, it is never so satisfactory, except as a means of classifying catalogues of symptoms, &c., for examinational purposes.

The descriptions are for the most part marked by originality of wording, but in some instances the author has elected to abide rigidly by the traditions of old. Hence we find repeated the familiar confusion about 'bronchial breathing.' Like all other writers Dr. Harris rightly records that it is heard over the trachea, but instead of allowing the student to hold fast by that great fact, and so be enabled to set up for himself a normal standard of bronchial breathing, he is once more directed to search for the typical sound in cases of pneumonia! Why may not the student be taught in books as well as at the bedside that bronchial breathing is one of the normal breath sounds, so that he may learn to know it and recognise it again when he meets it over consolidated lung?

The diseases of the pleura and the operative procedures in cases of effusion are fully considered, but, if exception may be taken to an otherwise excellent description, the section on pneumothorax is capable of still more elaboration by the light of Dr. West's demonstration of the cohesive force of the two pleural layers, and the fact might be made more clear that an opening into the pleura, either from within or without, is not in itself sufficient to produce pneumothorax.

The chapters on emphysema and phthisis are particularly worthy of note, the latter being well illustrated by coloured drawings. The more recent methods of treatment, however, founded on the theory of lessening the activity of the bacilli by antiseptic fluids and gases are not mentioned, possibly because the author's experience has led him to disbelieve in their efficacy. In some respects the descriptions of treatment throughout the book would be improved by a little more elaboration of detail. Generalisations, such as the advice to a phthisical person of small means to 'go to Australia,' without any distinction being made between Victoria and Queensland, for instance, is hardly up to the standard of precision required of the practical adviser. The section devoted to the heart and great vessels is in every way admirable, and terminates a compact work of sterling merit which deserves the cordial recognition of the profession.

E. Clifford Beale, M.B.

Article 1024.

The Goulstonian Lectures. On Insanity in Relation to Cardiac and Aortic Disease and Phthisis. Delivered before the Royal College of Physicians of London, March 1888. By William Julius Mickle, M.D., F.R.C.P.Lond., Medical Superintendent Grove Hall Asylum.

In the first of these lectures Dr. Mickle considers the special effects which diseases of the heart have in modifying insanity. That they should have some does not admit of doubt, though our ideas on the subject have heretofore been somewhat vague. Dr. Mickle's description of the peculiarities of the cerebral circulation is very skilfully given. Some writers seem disposed to avoid facing the fact that the skull is a closed cavity in which, by the inevitable laws of physics, the quantity of fluid must remain the same. Hence it is difficult to understand how the amount of intracranial blood can be increased or diminished. Some writers assume that by the tergescence of the tufts of the choroid plexus pressure is applied to the nerve roots of the vagus, thus checking the action of the heart; others suppose that the same plexus force down the cerebro-spinal fluid from the ventricles of the brain to the subarachnoid space of the spinal cord; others hold that the venous sinuses act as reservoirs for extra blood, so that when the pressure has increased in the brain the blood flows with greater freedom out of the skull, and that when the brain is anæmic, as in sleep, the sinuses become fuller of blood. Dr. Mickle observes that 'it is not altogether clear why the spinal cord should be deemed to be prepared to receive without embarrassment or disorder two or three or more ounces of cerebro-spinal fluid over and above the usual quantity, and at a moment's notice, on the behest of the brain.'

It is to be kept in mind that our direct observations upon the cerebral circulation and the enlargement and diminution of the encephalon and its vessels are necessarily made upon brains in which the skull has been opened, when, of course, the normal condition is deranged and the cranium has ceased to be an airtight cavity. It is clear that we do not yet entirely understand by what arrangements we may have hyperæmia and anæmia within the skull. Dr. Mickle has studied the effect of diseases of the heart in a large number of cases; he reckons as many as 236. He finds that more or less general hypertrophy and dilatation of the heart are associated with depression, moroseness, and melancholia, and also with dementia, amnesia, and deterioration of the mental powers, rather than with any symptoms of mental exaltation or active mania. In mitral disease there was a tendency to melancholia. In alteration of the aortic valves ideas of persecution and a tendency to violence were noted. The power of disordered circulation in causing mental derangement was well illustrated by an asylum porter afflicted with valvular disease. He was subject to attacks of high pulse, congestion of the lungs, with dyspnœa and lividity of the face. He died of albuminuria, and a few days before death confessed to Dr. Mickle 'that when in his "bad turns" he for years had had visual hallucinations or illusions, and that, as in dyspnœal lividity he spoke to me, he could see a man and dog at the foot of his bed.'

In the first two lectures Dr. Mickle enters on an interesting line of research to which he has already contributed much. The third lecture is on Insanity in Relation to Phthisis, and is also well worthy of attention. Altogether in this little book we observe the usual characteristics of Dr. Mickle's work, painstaking and original observation, with a complete study of what has been previously done by other writers.

W. W. Ireland, M.D.

Article 1025.

A System of Midwifery. By William Leishman. M.D., &c. Fourth Edition, Glasgow: James Maclehose & Sons. 1888.

All readers of obstetrics will welcome a new edition of Dr. Leishman's book. Very valuable additions have been made to the chapters on physiology with the assistance of Professor McKendrick. In some respects, however, it is hardly brought up to the times. This applies chiefly to the more rare complications of obstetrics. For instance, in extra-uterine gestation, but little stress is laid upon the more common tubal variety, with its symptoms; and hardly any particulars are given of recent operations in this direction. Again, when dealing

with inversion of the uterus, although the author mentions Dr. Aveling's repositor, he scarcely notices its chief feature, viz., sustained elastic pressure in the axis of the pelvis, and he even entertains the removal of the uterus in chronic cases, a mode of procedure which is now almost universally condemned as unnecessary, when the treatment by sustained pressure is efficiently carried out. Passing on to the section on obstructions to labour, we find the complication of a fibroid tumour—certainly not an uncommon one—dismissed in a few words. In a book, entitled 'A System,' we think that every possible contingency should be dealt with in the fullest way. The main portion of the book, dealing with the mechanism of labour, &c., could not be improved upon. The diagrams are numerous and excellent, and show at a glance what they are intended to convey. J. INGLIS PARSONS, M.D.

ARTICLE 1026.

A Text-Book of Physiology. By M. FOSTER, M.A., M.D., LL.D., F.R.S. Fifth edition, largely revised. Part I., comprising Book I. London: Macmillan & Co. 1888.

THE appearance of a new edition of Foster's *Physiology* is a similar event in the physiological world to that of the birth of a new 'Quain' in the anatomical, and there is about as little left unsaid, which might still be said with any advantage, upon either occasion. The volume under review at present deals with the blood, the tissues of movement, and the vascular mechanism. Amongst the additions in the present edition are a series of histological descriptions introduced, 'not with the view of in any way relieving the student from the necessity of studying distinct histological treatises, but in order to bring him to the physiological problem with the histological data fresh in his mind.' In the interest of the medical student we would venture to suggest the addition of illustrations as a supplement to the text in the histological paragraphs. Such illustrations as adorn Stöhr's *Lehrbuch der Histologie* and have been reproduced in McKendrich's *Physiology*, are of great assistance to the student in enabling him to grasp the meaning of the text and recall to memory the specimens which he has studied in the histological class-room.

Where the scientific world has passed its verdict so conclusively on a work, as in the case of Foster's *Physiology*, commendation is not only useless but even, perhaps, somewhat impertinent. We, therefore, content ourselves with describing the scope of this the first part of the fifth edition.

BERTRAM C. A. WINDLE, M.D.

NOTES ON BOOKS.

ARTICLE 1027.

On Gonorrhœal Infection in Women. By W. J. SINCLAIR, M.D. London: H. K. Lewis. 1888.

THE aim of this book, which consists to a large extent of papers reprinted from the *Medical Chronicle*, is 'to put before the reader the present state of the question of gonorrhœal infection from the purely gynæcological point of view.' This Dr. Sinclair does at considerable length, with the aid of extracts from the writings of various authors, especially of Noeggerath on 'Latent Gonorrhœa,' and of Neisser, Bockhart, Bumm, and others on the gonococcus, and all that relates to it.

There has no doubt been a tendency in this country to look upon gonorrhœa as a disease of minor importance, and this has probably led to a certain amount of carelessness in the matter of treatment. It is to be hoped that the very gloomy picture of the consequences of gonorrhœa in women, drawn by Dr. Sinclair in this carefully-written work, will have influence in leading to the exercise of more care in diagnosis and thoroughness in the treatment of gonorrhœa in both sexes. ARTHUR COOPER.

ARTICLE 1028.

Index Bibliographicus Syphilidologiæ. Erster Jahrgang. Bearbeitet von Dr. KARL SZADEK. 1888.

THIS little work forms a guide to the various books and papers on venereal diseases, published during the year 1886. Dr. Szadek, who is the librarian of the Medical Society of Kiew, has evidently taken pains to make the index as complete as possible, and it will no doubt be found very useful by those who are working at the subject.

ARTHUR COOPER.

ARTICLE 1029.

Sitzungsberichte der Physikalisch. Medicinischen Gesellschaft zu Würzburg. 1887. (Würzburg).

LEUBE reports a case of four small hæmorrhages in the right crus cerebri which during life caused left hemi-paresis and -anæsthesia, with ptosis and dilatation of the pupil on the right side; and increased myotatic contractions on the left side. These were accompanied by headaches, loss of appetite, and vomiting.

Bumm has collected seventeen cases of parotitis after ovariotomy. (*See* LONDON MEDICAL RECORD, Nov. 15, 1887, Art. 7470.) The main deductions from these cases are, that it usually commences on the sixth or seventh day after the operation, but may be as late as the twelfth. There is no fixed relation between the side affected and the ovary removed; for even after a double ovariotomy it has been unilateral and *vice versâ*. Twenty-three per cent. of the cases were fatal. In two cases the sublingual and submaxillary glands were also affected. In nine cases suppuration ensued.

Nieberding refers to twenty cases of dystocia due to cystic degeneration of the kidneys in the fœtus. In a case he relates, he attributes the cystic degeneration to the absence of the ductus arteriosus Bottalli. Hoffa refers to the after-history of three patients, from whom the thyroid had been removed. In all a myxœdematous condition ensued with considerable mental failure. In one case improvement coexisted with the growth of a nodule, which had been left behind, and in two of the cases there were epileptiform attacks.

Leube gives the clinical history of a man, aged 30, with sarcoma of the right pleura. There was a history of pain in the right chest for two years. The symptoms were those of pleuritic effusion; paracentesis was performed a year before his death, and blood-stained fluid was drawn off, but later on no fluid could be extracted. The heart was displaced to the left. Finally the left recurrent laryngeal nerve and the left innominate vein were involved. Attacks of dyspnœa became more and more frequent until his death. G. N. PITT, M.D.

ARTICLE 1030.

Report on Treatment of Typhoid Fever at the Coast Hospital, New South Wales.

MOST authorities on the subject are probably now agreed that it is not possible by the exhibition of drugs to shorten the duration of an attack of enteric fever, or even to lessen the severity of the disease. But Dr. Pierce, the medical superintendent of the Coast Hospital, New South Wales, does not apparently hold this view. It would appear that in this hospital the mortality during the first five months of the current year was much lower than in 1886 and 1887, and compared very favourably with the mortality rates in the metropolitan hospitals. Dr. Pierce was, in consequence of this, requested by the medical adviser to the Government to report as to the causes which, in his opinion, had led to this result. From a perusal of this report, we infer that Dr. Pierce is inclined to attribute the low mortality in his hospital to the use of acetanilide. He thinks that it renders the course of enteric fever milder than it otherwise would be, but that it probably may not lessen the duration of the disease. He says that 'the appetite improves, and the liability to inflammatory complications diminishes in most cases in which acetanilide has been given continuously for several weeks.' In other respects his experience of the effects of this drug agrees in the main with that of other observers. He admits, also, that when the effect of the drug is passing off, the temperature often rises very rapidly, and adds that, when freely given, there is liability to the occurrence of occasional cyanosis of extremities and face, with irregular pulse. Dr. Pierce appends to his report a case illustrative of the treatment by acetanilide. Turpentine was given all through this case, with occasional doses of belladonna, digitalis, and urethan; but, notwithstanding this, it was necessary to have recourse to alcohol on the forty-seventh day.

Dr. Pierce tells us nothing in his report as to the general character of the cases admitted to the Coast Hospital, and leaves the personal equation altogether out of account. The mortality from enteric fever may differ widely from year to year in the same hospital and under similar treatment, and Murchison observed that the disease was much more fatal in one village than in another a few miles off. What the actual mortality was upon a given number of cases in the Coast Hospital, is, we think, of far less importance in drawing a conclusion than the character of the cases upon which it was calculated. Dr. Pierce seems to think that high temperature is the all-important factor in the disease, and leaves out of account the fact that individuals differ in the extent to which pyrexia is injurious to them, some cases being little, if at all, affected by it, whereas in severe and fatal cases the temperature is often scarcely raised above normal, thus showing that high temperature cannot be held accountable for the severity of the physical symptoms accompanying it. It is probable that the nature of the cases, not the antipyretic, determined in a great measure the favourable results in the Coast Hospital.

SOCIETY OF HOSPITAL READERS IN ST. PETERSBURG.—A society of hospital readers has been organised in St. Petersburg by some local philanthropists. Its members will visit the town hospitals to entertain the sick and reconvalescent with reading aloud useful and moral works.

DIETETIC PREPARATIONS.

SPARKLING WINES.

CHAMPAGNES.

IN continuation of the remarks in the LONDON MEDICAL RECORDER of Sept. 20 on the purity of the champagnes recently tested and analysed for this journal, those of Dupuy & Fils of Epernay—the resident English partner being Mr. Maurice Meyer, of Savage Gardens, Tower Hill, E.C.—are next on the list. These wines take an equally high position with those of the firm mentioned in the issue of Sept. 20, and can be recommended for the physician's purpose with every confidence. The proprietors claim that only selected grapes, grown in the celebrated vineyards of Bouzy are used in its manufacture. They are certainly wines possessing excellent qualities. In the *brut* or natural state, without the addition of liqueur, and well matured, they are especially adapted for the use of invalids. Dupuy's wines can also be obtained, dry or extra dry, to suit the palate of the connoisseur, or those persons whose state of health does not require the *brut* wines.

Our analyst's analysis and report is as follows: —

Specific gravity at 60° Fahr.	994·8	per cent.
Absolute alcohol by weight	10·88	,,
Equal to proof spirit	23·50	,,
Glucose	1·02	per cent.
Extractives, &c.	1·22	,,
Ash	·18	,,
Total solids	2·42	
Acidity calculated as acetic acid	·50	,,
Polarisation	·70	,,

This is a dry champagne, containing very little sugar; the sugar present is natural to the grape, and not added in the form of liqueur. The wine has been carefully fermented, and its purity strongly recommends it for the use of invalids, under medical direction.

NEW PREPARATIONS.

HOCKIN'S SPECIAL PREPARATIONS.

WE have received from Messrs. Hockin, Wilson, & Co. samples of various special preparations, in connection with which the firm has made a reputation. The Liquor Podophyllin (Hockin) is a bright clear solution of this valuable purgative, easily miscible with either acid or alkaline solutions. It contains a quarter of a grain of podophyllin to the fluid drachm, and is a convenient vehicle for the administration of the drug, which is *the* cholagogue purgative of the pharmacopœia. Their Liquor Podophyllin et Pepsin (Hockin) is a soluble preparation of the preceding, together with pepsin, and is well suited to the treatment of cases of dyspepsia due to deficient secretion, complicated with sluggish action of the liver. The dose is one fluid drachm. In other cases of atonic dyspepsia, in which the ordinary stimulants are insufficient, the combination of podophyllin, belladonna, and strychnine (Liq. Podophyllin et Belladonna c. Strychnia, Hockin) will often afford relief. It improves the tone and regulates the blood supply of the digestive tract, and thus improves the appetite and facilitates digestion. It is of benefit generally in catarrhal

condition of the mucous membrane of the alimentary canal, giving tone to the muscular tissue and effectually preventing constipation and fæcal accumulation.

Their Ext. Cascaræ Sagradæ Liquidum Insipidum is intended to facilitate the administration of this useful but nauseous drug. The persistent bitterness has been successfully mitigated, without depriving the preparation of its valuable laxative effects. The dose is from a half to one fluid drachm, but the best effects are obtained when smaller doses are given at regular intervals extending over several days.

TOILET LANOLINE.

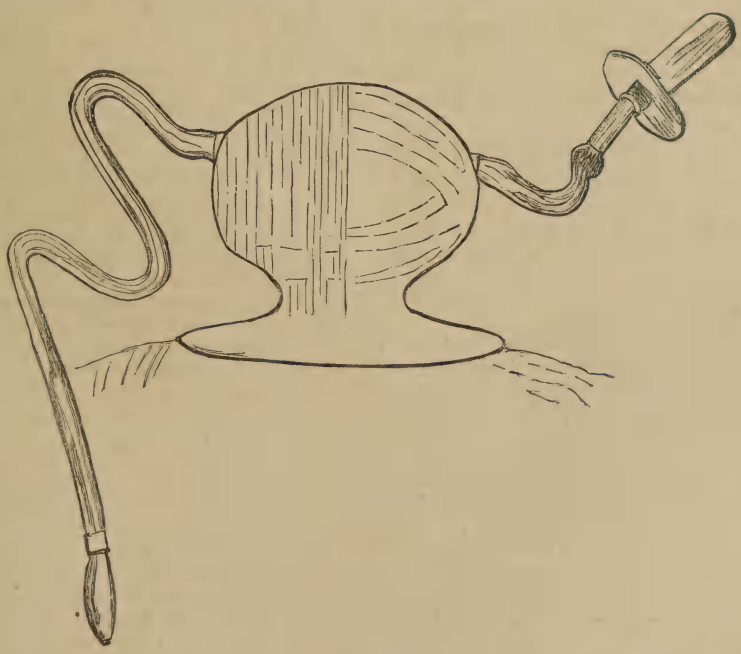
THE 'Toilet Lanoline' prepared by Messrs. Burroughs, Wellcome, & Co., is another of the useful series of preparations with lanoline as a base. It consists of lanoline rubbed down with purified petroleum jelly and duly perfumed with otto of rose. It is necessarily an elegant and efficacious application in cases of sunburn, chapping, and other minor blemishes of the skin, being soothing in its action, and rendering the skin smooth and supple.

NEW INVENTIONS.

A NEW SUCKLING APPARATUS.

PROFESSOR BUDIN, Agrégé of the Paris Medical Faculty, in an interesting clinical lecture at the Paris Clinique d'Accouchement, reviewed the different methods of suckling children, when giving the breast presents difficulties, either from the condition of the child, or soreness of the breasts. M. Auvard's apparatus, known as the Tetielle Auvard, now modified by Professor Budin, meets many difficulties that may arise. It may be described as follows:—

1. A spherical glass receptacle, somewhat resembling a cupping glass; on one side is an opening which is applied to the breast. The edges of this receptacle are wide, on an incline, so that the nipple cannot be strangulated. At the two extremities of the large diameter of the glass receptacle, and on an axis which would be perpendicular to an axis passing through the centre of the largest opening, are two orifices which communicate with the outer air, through two glass passages or short tubes. An India-rubber tube for the mother, to the extremity of which a mouth-piece is fixed, is attached to the upper glass tube. On the lower is fixed an India-rubber tube ending in a teat for the infant's use (a safety valve may be placed in the teat). The mouth-piece for the mother is made of porcelain. The India-rubber tubes are closely attached to the apparatus by thread. The dimensions of this spherical glass should be carefully graduated. The concave portion, which is applied to the breast, is 6 centimètres in diameter at the base, and 24 millimètres where it opens out into the bulging portion. For weakly children, incapable of exercising the necessary effort for suction, the safety valve in the teat intended for the infant is removed; the glass receptacle is replaced on the breast; the mother presses the tube leading to the infant's mouth, then through her mouth-piece exercises an aspiratory action, and the milk flows into the spherical glass receptacle, and occupies its lower portion. When a sufficient quantity of milk has passed, the mother ceases to press the tube, and the milk passes by its own weight into the teat, which is perforated with small holes, and thus enters the child's mouth. When the milk is swallowed, the mother again presses the tube, milk again passes into the tube, thence into the child's mouth, and so on until the infant has received sufficient nourishment. M. Budin has at present in his wards a child with ill-formed lips and no palate; it is therefore incapable of taking the breast, and the mother nourishes it by means of M. Auvard's apparatus as modified by Professor Budin. The infant develops satisfactorily



and increases in weight. This apparatus is equally useful for children able to take the breast. The holes in the teat are then replaced by lateral incisions in order that the infant may not lose the habit of sucking. It is necessary that every portion of this apparatus be kept scrupulously clean. It is easily unmounted and cleaned by means of an *écourillon*, a cleansing brush mounted on a movable rod, which should be kept immersed in a solution of naphthol, 0·40 centigrammes naphthol beta, and one cubic centimètre of alcohol to one litre of water. Before using the brush, it should be dipped into boiling or filtered water.

Professor Budin's suckler renders *gavage* or artificial feeding easier and more satisfactory. It is used as follows:—

The nurse presses between her fingers and thumb the lower India-rubber tube, to which no teat should be attached. She sucks through the other tube, and the milk spurts forth. When the spherical glass receptacle is sufficiently full, the infant is held on the lap of another person, who introduces the tube of the *gaveuse* into the infant's œsophagus and stomach, the nurse then places the extremity of the India-rubber tube of the suckler on the cupola of the *gaveuse*, she ceases all pressure, and the milk flows through into the infant's œsophagus and stomach. The tube passed into the infant's stomach is then immediately withdrawn. This method of artificial feeding neither causes vomiting by the infant nor fatigue to the nurse.

MISCELLANY.

A National Association of Railway Surgeons.—On June 28, 1888, a National Association of Railway Surgeons was organised in Chicago. Railroad surgery is a special branch of surgery, and the books and medical colleges have so far neglected to give the necessary information upon this important subject; hence, the necessity of a separate organisation. On account of the force and violence of most of these accidents, there seems to be a greater destruction of tissue, and such wounds are much more likely to slough than similar wounds caused by less violence. We wish this organisation the greatest success in bringing together the much-needed knowledge of the best methods of treating all such injuries.

Teaching Medicine in Ecclesiastical Colleges in Russia.—The Russian Holy Synod has recently ordered that an obligatory course of medical science should at once be commenced in all ecclesiastical colleges. The programme may be briefly summarised as follows:—Anatomy and physiology of the human body in their essential outlines. A detailed course of hygiene and dietetics. Causation of diseases. Infectious and epidemic affections, as well as most common sporadic ones. Disturbances of general systemic nutrition and their treatment. General symptomatology. Healing powers of nature, drugs, medical plants (collection, classification, therapeutic uses); prophylactic means, including disinfection and ventilation; methods of internal and external treatment, sick nursing generally, especially nursing the wounded and insane; evacuation of the sick and wounded, first aid in cases of sudden illness and poisoning, poisons and antidotes, diseases of children, nursing and treatment in most common infantile diseases, rudiments of school hygiene. What is homœopathy? Cattle diseases, diagnosis and treatment of most common diseases of cattle, horses, and other domestic animals; domestic dispensaries, their arrangement and management.

An Accident from Biting the Finger Nails.—Dr. Jerome Tuthill, of Chicago, Ill., sends the following to the *New York Medical Record*:—A novel accident, resulting from a habit of very common prevalence among nervous people, was brought to my notice recently. A young lady presented herself at my office complaining of a constant irritation in her throat. Two weeks previously she had been taken with a severe 'sore throat,' which was treated by a neighbouring physician. Under his care, she says, the inflammation quickly subsided, but there still remained a sensation of irritation. Examination revealed a small fleshy-looking object, about the size of a kernel of wheat, adherent to the tissues posterior to the left tonsil, by one end. The other parts of the throat were normal. The little mass could not be detached by a cotton-covered probe, but by the use of forceps it was easily removed, and on examination proved to be a piece of finger-nail, which had become covered by a cheesy deposit. A broken piece of the nail was also removed from under the mucous membrane at the same spot by a sharp-pointed probe. The patient then confessed to the habit of biting her finger-nails, and, moreover, could remember that a day or two previous to the onset of her throat trouble a piece of nail which she had bitten off had become lost in her mouth, but after it had caused a fit of coughing she had forgotten about it until reminded by my discovery.

The General and Local Effects of Paraffin Oil on Workmen.—According to Dr. J. K. Mitchell (*Medical News*, Aug. 11, 1888) it seems that sailors engaged in loading ships with the oil in barrels, were often seized quite suddenly with cramplike pains in the stomach and intestines, together with severe constricting pain about the lower part of the chest, with slight but obstinate diarrhœa, nausea, and occasionally vomiting. These symptoms generally yielded to simple treatment. At the Atlantic Oil Refinery the author examined a number of men with reference to the eruptions which are said to be caused by handling the oils. He found that the men in the room in which cold pressure is applied to the paraffin wax were those who suffered most severely. Most men are affected in from four to six weeks from beginning this kind of work, but some never suffer at all. The eruption consists of boils, comedones, &c., distributed all over the body. In one case the shape of the red blood-corpuscles was altered, they being ovoid or crenated. The boils generally started round a hair follicle. The general health of the workmen was good and the effects were purely local. Workers in benzine suffer in a similar way, though the author did not meet with any cases. Pump men, who are liable to be splashed by the crude oil, have the eruption badly.—An experience of nineteen years' practice in an oil town has enabled Dr. Sharp to speak *ex cathedrâ* on the effects of handling the oil (*Medical News*, Aug. 11, 1888). He points out that in discussing effects it is necessary to distinguish carefully between the heavy and the light oils. He asserts that the worker in heavy natural oils runs no risk from inhalation of the gas, and he has never met with an accident of this kind. In the light oil districts, on the other hand, serious accidents are frequent from the inhalation of gas, the effect coming on very suddenly. Some amount of tolerance seems, however, to be established after a time. He has never met with any skin eruption or acne from this cause, nor does he believe that the heavier oils ever give rise to such symptoms. Internally, the heavy natural oils have been taken in doses of from 1 to 4 drachms several times a day for bronchitis and phthisis. No ill effects were ever noticed. This, however, does not apply to heavy oils left after distillation. The so-called 'carbon oil' is a prompt and reliable counter-irritant. Internally, the natural oil of 29° B. has been taken in half-ounce doses, with decided benefit. Both crude oils of lighter grades and refined (carbon) oil, are poisonous to the inferior grade of insect life, also, if applied freely, to vegetable life.

The London Medical Recorder.

ARTICLE 1031.

THE FOURTEENTH ANNUAL MEETING OF THE AMERICAN NEUROLOGICAL ASSOCIATION.

THE following abstract of the discussions is from the *Boston Medical and Surgical Journal*, Oct. 4, 1888. Dr. J. J. Putnam, of Boston, presided.

On Nervous Affections following Injury (Concussion of the Spine, Railway Spine, Railway Brain).—A paper on this subject was read by Dr. P. C. Knapp, and a discussion followed. Dr. E. C. Seguin, of New York, agreed with the reader of the paper that there was a common etiology in these cases, but the pathology was different, and each case should be studied separately. There were two great sources of error; first, that symptoms were often attributed to the accident which had existed before it; and, second, that the patient has many subjective symptoms which are due to unintentional deception, and thus deceives the physician.

Bernheim had shown that hypnotised patients can give themselves suggestions, and certain symptoms in these cases, but in only a minority of them, must be regarded as auto-suggestions, the result of a firm belief on the part of the patient. There was no doubt that hysterical symptoms might exist with organic disease, as the speaker had shown in a series of non-traumatic cases published in 1875. The reality of the neurasthenic state of which the writer spoke was undoubted, but it existed in many cases not the result of trauma. In railway cases, the objective symptoms were few and far between.

Dr. Langdon C. Gray (New York) said that in these cases we have to demonstrate to a jury what we cannot demonstrate to ourselves. In many cases it is almost impossible to decide on which side to testify. When a patient is injured in a city, the lawyers come down upon him and impress upon him the danger to which he has been subjected. This process continues, the case drags on, and the patient cannot afford to get well for fear of being sued for conspiracy. This causes a set of psychical irritations much greater than any hypnotic suggestions employed in France. If cases are settled promptly, the neurasthenic states recover promptly, but if not, they last because the patient cannot break the habit. Neurasthenic symptoms do not usually come on with organic disease, the contrast between the unstable nervous bearing of a patient in the neurasthenic state, and the calm quiet demeanour of a patient with severe organic disease, is very great. It is a question whether the neurasthenic symptoms may not be the result of the attendant circumstances of the injury.

Dr. W. Zenner (Cincinnati) said that no class of cases was more difficult to decide upon, and the difficulty will persist until we know more about functional diseases. It is important to note that hysterical symptoms may be present in organic diseases, and they are not uncommon in toxic affections, such as lead-poisoning. Deception in regard to symptoms may be very considerable, even with actual disease, and it should not lead to a diagnosis of no disease. Actual malingering, except in prisons or in the army, to escape temporary duties, is a very rare thing.

Dr. Putnam said that hemianæsthesia was of value as a sign difficult to simulate.

Dr. Knapp concluded the discussion by the observation that in the cases reported there was, as a rule, no question of damages; the patients were dependent on their own earnings, and anxious to get back to work, and, therefore, there was little cause for deception.

On Heat-centres in Man.—Paper read by Dr. Isaac Ott. Experiment had shown the existence of heat-centres in the lower animals, and cases were cited indicating similar centres in man. In certain cases of injury to the cortex, near the fissure of Rolando, the temperature rose to 104° Fahr., and other causes of high temperature at the time were absent. Other centres probably existed in the corpus striatum, the optic thalamus, the pons, and the medulla. Dr. Gray, of New York, doubted whether cerebral thermometry was of any use here, the normal variations in cerebral thermometry were so great, and the variations in different lesions so discrepant.

On Epilepsy following Cerebral Hemiplegia.—The paper, by Dr. E. D. Fisher, New York, was based on the report of a series of cases of cerebral infantile paralysis attended with convulsive attacks. The paralysis was usually spastic, and the growth of the parts was affected. There was imbecility (or idiocy) and epilepsy. If the lesion be in the cortex, as is usually the case in children, it is attended with convulsions and imbecility; if lower down, there are rarely, if ever, convulsions. Idiopathic epilepsy may simulate the Jacksonian type. When the hemiplegia is congenital, it is due to meningeal hæmorrhage with porencephalia; but the acquired form is due to venous thrombosis (Gower's) or, in older children, and after acute infectious diseases, to embolism. Hæmorrhage and polioencephalitis are rarer causes. The atrophy was slight, and never so great as in infantile spinal paralysis. There was often ataxia rather than loss of power, and other disturbances of motion from incomplete lesions of the pyramidal tract. In most cases the average duration of life as given by Henoch—viz., 20 years, was much exceeded. As to the seizures, loss of consciousness was the chief feature; even in the Jacksonian type, consciousness was lost.

Dr. Knapp (Boston) said that two years ago Dr Sachs had called attention to convulsions as a valuable focal symptom distinguishing between lesions of the cortex and lesions lower down, and the speaker divided these lesions in the same way a year later. But it was uncertain whether this symptom was absolute significance or not, and it is extremely valuable to get autopsies of cases of intracerebral lesion with convulsions. In his cases the atrophy was greater than in most of the spinal cases. Dr. G. L. Watson said that the convulsions were, as a rule, focal.

The Relation of Renal Diseases to Diseases of the Nervous System.—The paper on this subject was read by Dr. R. T. Edes (Washington). So-called uræmic symptoms might better be divided into uræmic, urotoxic, and uroseptic, and the vascular symptoms were angioneurotic and angionothentic. The forms of mental disturbance that are seen before there is much diminution in the elimination

are not uræmic, the later delirium is urotoxic. The symptoms of a localised cerebral lesion, formerly termed 'serous apoplexy' and now uræmia, are not due to any actual lesion, like a hæmorrhage, or to uræmia, but to a nervous effusion in any condition where the blood-vessels are enfeebled. Uræmia ought not to cause unilateral trouble, but œdema may. Suppression of urine for a few hours preceding attacks of apoplexy is the result of the latter and not the cause. The causes of the nervous symptoms in renal disease are due to the complicated interaction of several factors—namely, 1. Degeneration of the blood (hydræmia, anæmia, &c.). 2. Poisoning of the blood (uræmia, ptomaïnes (?), &c.). 3. Disordered vaso-motor action (spasm, dilatation). 4. Vascular degeneration (aneurism, &c.). In treatment, diaphoresis helps rather by its action on vascular tension than by the amount of water or urinary constituents it carries off. The same may be said of bleeding. In cases of high arterial tension, nitroglycerine and possibly the continued use of morphine may give relief. Urea was clearly not the poison in uræmia, and it seldom had any influence except when injected in large amounts. He did not advise the continued use of morphine in high arterial tension, but suggested that its cautious use might sometimes benefit. A discussion followed.

The Cortical Localisation of Cutaneous Sensations, by Dr. C. L. Dana, of New York.—Were there separate sensory centres, or were they combined with motor centres? He reported four cases, and had tabulated 133 others, and concluded that the situation of the sensory centres coincided with that of the motor centres, but that they were larger and more diffuse, and it required a deep and sudden lesion to affect them. A total decussation of the sensory nerves was probable. Cutaneous anæsthesia of cortical origin was local and incomplete; total anæsthesia was either functional or sub-cortical. The muscular sense was probably located in the inferior parietal lobule. In opposition to Ferrier's views of separate centres, eighteen cases of lesion of the hippocampus and gyrus fornicatus had been found without anæsthesia, and no anæsthesia had been noted in cases of tumour of the corpus callosum. The gyrus fornicatus very possibly contains the centre for smell, as it is very small in anosmic animals whose tactile sensibility is good.

Dr. C. K. Mills (Philadelphia) did not agree with these conclusions, and adhered to Ferrier's views. 'It is impossible to get over the cases of lesion of the motor centres, where there has been absolutely no loss of sensation. Moreover, cases of lesion of the gyrus fornicatus with anæsthesia have been reported, one of them by the speaker.

Dr. A. Starr, of New York, thought it was still an open question. Embryology favours Dr. Dana's views. No fibres in early fœtal life are found moving upwards towards the limbic lobe or the gyrus fornicatus, but all go to the convexity. Comparative anatomy is important also. Meynert showed that the gyrus fornicatus is large in smelling and small in non-smelling animals. In pathology, many of the cases are unsatisfactory. Lesions of the corpus callosum are rare. Lesions of the hippocampus are suspicious, because it lies on the crus. This would vitiate Ferrier's conclusions. He believed that the tactile area of each half of the body was represented on both sides of the brain, just as the eye was.

Dr. Seguin (New York) favoured Dr. Dana's views. The older experiments in extirpating motor centres also favoured this view, as did the marked sensory aura as a signal symptom in cortical epilepsy. The results of removal of portions of the cortex in man will give valuable information. In a case of his own, where a tumour in the motor region was removed, the man has anæsthesia in the cheek and hand of the opposite side, more marked since the operation. Other papers read were:—*A Subcutaneous Connective-tissue Dystrophy of the Arms and Back, associated with Symptoms resembling Myxœdema*, by Dr. F. X. Dercum (Philadelphia); *Subacute Progressive Polymyositis*, by Dr. G. W. Jacoby (New York); *Muscular Dystrophies*, by Dr. B. Sachs, of New York.

E. J. Edwardes, M.D.

Article 1032.

JACOBI ON THE THERAPEUTICS OF INFANCY AND CHILDHOOD.

In the *Archives of Pediatrics*, vol. v., No. 10, the professor deals with the subject of tuberculosis. The most frequent seats of the affection in the young are the bones, the joints and the lymph bodies; among the latter, those of the neck and mediastinum are most subject to primary infection. The commonest forms in children are acute miliary tuberculosis, acute or subacute cheesy pneumonia and genuine chronic tubercular phthisis with cavities. The latter form is not very frequent, though it does occur at all ages—sometimes even during the first year of life; it is often accompanied or preceded by pleurisy. That form of phthisis which is developed out of scrofulous pneumonia is met with more frequently than any other. It is a common result of the bronchitis and catarrhal pneumonia attending measles and whooping-cough, and is usually attended with considerable changes in the glands. The treatment must be chiefly preventative and directed towards shortening, and mitigating the severity of, the bronchitis, whooping-cough, &c., especially when occurring in a patient inclined to glandular indurations. Unabsorbable lymphatic glands must be eradicated. Among the causes of tuberculous consumption are insufficient supply or change of air, absence of exercise, continuous overwork, monotonous food and persistent mental emotions. Thus tubercular infiltrations are frequently found among the inmates of prisons, workmen in factories, soldiers in barracks, and children in orphan asylums and large boarding-schools. It is certain that rowing, skating, gymnastics, tennis, and even calisthenics if practised in the open air would expand many a child's chest, aërate his blood, keep his organs vigorous and eliminate invading poisons. Hereditary predisposition may be transmitted even by such parents as appear to be in fair health. The premature ossification of the costal cartilages, most frequently found about the upper part of the chest, shortens the sterno-vertebral diameter and gives rise to contraction of the thorax and insufficient expansibility of the upper lobes of the lungs. In such cases catarrhal and inflammatory thoracic diseases are liable to become dangerous, and gymnastic exercises are required in early childhood. Direct transmission from the parents is possible in some cases; therefore the child must not share the bed or room of the consumptive; neither must

it be kissed by such a person. A consumptive mother must not nurse her infant. She is a greater danger than one affected with syphilis. Two cows out of every hundred are tubercular; thus the least that can be done is to boil the milk intended for the nourishment of the infant. Monotony of food does not account for many cases in children, though, of course, nourishment is a most important factor in the treatment. Sweet cream may be added to the milk in small quantities, and as long as the condition remains afebrile, Debove's system of over-alimentation may be tried with advantage. Alcoholic stimulants diminish perspiration and act favourably upon the diarrhœa, but they do not suit over-irritable natures or cases complicated with hæmoptysis. Massage, upon Dr. Weir Mitchell's plan, will usefully take the place of exercise when this cannot be obtained.

Change of air is mostly a negative remedy, and where it is associated with the excitement and dissipation of many health-resorts it is positively injurious. If the climate is cold it should be also dry, since moist air is much the better conductor. A rapid increase in the watery part of the blood may suffice to produce hæmoptysis. A patient, therefore, who is subject to hæmorrhage should avoid copious draughts of liquids. The temperature must be uniform, free from sudden currents of air, and sufficiently warm to allow of out-door life. The atmosphere should be free from microphytes. This freedom is best found at high altitudes provided they are but thinly inhabited. In the factories of the Jura mountains, with a great working population, at an altitude of 3,500 feet, tuberculosis is common. Clothing must be warm and frequently changed, and the skin must be hardened by cold or nearly cold spongings.

Of internal remedies, arsenic holds a high place. It has a stimulating effect upon cell growth, and therefore, amongst other things, strengthens the walls of the blood-vessels. Digitalis is useful in getting more power out of the usually undersized heart of phthisical patients and thus emptying the veins, accelerating lymph flow and improving nutrition generally; as it is a glucoside and not a soluble alkaloid an extract is the best preparation. Other internal treatment is chiefly symptomatic; for high temperature, if antipyrin or other drugs of similar action fail, a combination of two or three of them may succeed. Local antisepsis is at present a thing of the future. For tubercular ulceration of the bowel, in addition to the ordinary drugs, naphthalin (4 to 10 grains daily) or resorcin may be given with advantage. Should fistula appear, the sooner it is operated upon the better. Pulmonary hæmorrhages are uncommon in children; they must be treated with ice bladders, and internally ergot, mineral acids, and digitalis. Subcutaneous injections of ergotin are apt to cause abscesses. Night-sweats sometimes occur in children over five years of age and are treated with acid sponging externally and atropia, agaricin, or duboisin internally. Sometimes ergot will succeed when other remedies fail.

RALPH W. LEFTWICH, M.D.

THE Editorial Committee of the Austrian Committee have just completed their task, and the new Pharmacopœia will be published in the course of the present year. It will take position as an official guide on and after Jan. 1, 1889.

ARTICLE 1033.

VON BERGMANN ON CEREBRAL SURGERY.

THE *Archiv für Klinische Chirurgie*, Band 36, Heft 4, contain an important and lengthy paper by Professor von Bergmann on the Surgical Treatment of Affections of the Brain. The subject is considered in a conservative spirit, and the distinguished author, whilst anticipating many good results from the future course of cerebral surgery, recommends for the present caution in operative interference, and a careful study of the conditions that are likely to be favourable or the reverse to the success of such treatment. The past results and the prospects of cerebral surgery are considered in reference to the treatment, in the first place, of deep cerebral abscess; secondly, of tumours of the brain; and, lastly, of epilepsy.

The value of surgical intervention in cases of cerebral disease is most marked, Von Bergmann states, in the treatment of abscess. If it be granted that cerebral suppuration, if left to itself, can result only in fatal rupture into the ventricles, or inevitably fatal meningitis, the opening of an abscess in the brain must be regarded as a deliverance from an urgent danger to life. With reference to the doubts recently expressed by Rose with regard to the indications for trephining in cases of cerebral abscess, which doubts are based on the pathological fact of a frequent encysted condition of the abscess and on the difficulties in diagnosis, it is held that the force of the first objection has been much overestimated, and that of the latter may in time be overcome. The chronic form of cerebral abscess to which surgical attention is particularly directed, is, as a rule, bounded by a membranous capsule that may be readily detached from the surrounding tissues of the brain. The presence of such capsule, however, is no prevention against the extension of suppuration, and one would ignore the results of clinical and pathological observation in supposing this encysted condition of a cerebral abscess as likely to arrest its growth or to lead to any retrogression. The prospects of an abscess of the brain, if left to itself, being discharged through the cribriform plate into the nasal cavity, or through some cleft through the roof of the middle ear, are so very slight that they need not be taken into consideration. The difficulties in the way of recognising a cerebral abscess are, it is asserted, not so great and so formidable as they were once supposed to be, and now, under certain conditions, the diagnosis may be established with much certainty. By far the most important factor in the diagnosis is the etiology of the affection. Cerebral abscess is never of idiopathic origin, but is always the result of some other morbid condition, and usually one associated with suppuration. In most instances it either follows an open wound of the soft or osseous coverings of the brain, or some intracranial suppuration, most frequently purulent disease of the internal ear. To cerebral abscesses of such origin may be added the so-called metastatic abscesses and those of tubercular origin. Metastatic suppuration in the brain, which in most instances is the result either of general pyæmia or of some gangrenous or purulent affection of the lungs, so very rarely takes the form of a solitary abscess, that it may be concluded that though the diagnosis in such cases may not be attended with much difficulty, the question of operative treat-

ment is not likely to come under consideration. In cerebral abscess of tubercular origin the conditions for operative interference are very unfavourable. The occurrence in connection with cerebral tuberculosis of a large collection of pus like an abscess of traumatic origin is very rare, and two instances only of such a condition have been recorded. In such cases the granulation layer of the enveloping abscess membrane contains innumerable tubercle-bacilli, and the pus is rich in micro-organisms. In any attempt to deal with an abscess of this kind seated in the soft structure of the brain, it would be found difficult to scrape away all the caseous infiltration from the enveloping membrane, and what remains would certainly cause progressive extension of the degeneration as far as one of the lateral ventricles and lead to perforation with the usual fatal result.

According to Von Bergmann, success from operative interference in cases of cerebral abscess can be expected only when such affection has been caused by injury or by aural or some other variety of osseous suppuration. It is important, therefore, to be able to diagnose these forms of cerebral abscess with certainty and in good time. In the consideration of cerebral abscesses of traumatic origin a distinction, to which much importance is attributed, is made between those formed on the surface of the brain at an early date—at the end of the first or in the course of the second week—usually in association with suppurative leptomeningitis, and those developed within the brain much later, it may be months and even years, after the occurrence of the injury. The first form of abscess is a patch of contusion of the cerebral cortex to which exciting agents of inflammation and suppuration have been admitted through a wound in the scalp and a breach in the skull. This abscess can seldom be distinguished from traumatic purulent meningitis ; but as the latter condition is, as a rule, developed early and with much rapidity, a late development of the so-called meningitic symptoms—in the course of the second week—a delay in the extension of the same, and a predominance of stupor and of paralytic signs, would indicate the presence of a circumscribed abscess, and therefore of one that might be treated by operation. The deep-seated traumatic abscess, although always preceded by a communication between the interior and exterior of the cranium, as in cases of compound fracture, is seldom, if ever, developed in an injured portion of the brain, and is usually separated from the external injury by a layer of apparently healthy cerebral substance. In cases of subcutaneous, fissured, starred, and depressed fracture of the cranium, in which the scalp remains intact, cerebral abscess, it is asserted, does not, as a rule, occur. The only exceptions to this rule are presented by cases in which the cranial fracture has involved the walls of the tympanic cavity or of the frontal sinus, or the cribriform plate. Gunshot wounds, in which some foreign material has passed into the skull, and comminuted fracture of small superficial extent with impaction of small fragments of bone in the brain, seem more liable than other head injuries to result in cerebral abscess. Although prolonged suppuration at the primary seat of injury may on good grounds be regarded as a predisposing cause of deep cerebral abscess, such abscess not unfrequently occurs after speedy healing of the external wound. The hope is expressed that the modern practice of treating recent compound fracture of the skull by trephining and antiseptic measures will in future diminish the number of cases of late cerebral abscess. It is stated that not only compound fracture of the skull and exposed wound of the brain, but also a simple wound of the scalp will suffice for the development of a deep cerebral abscess. How the impulse to suppuration is transferred through the bone and into the inner parts of the brain has not yet been satisfactorily determined, but there cannot, Von Bergmann asserts, be any doubt as to the fact. In such cases the cerebral abscess is always preceded by suppuration in the soft parts, usually of long duration. In some cases this suppuration is restricted to the skin and subcutaneous connective tissue, the bone remaining sound, whilst in other cases there may be some ostitis and necrosis, which latter condition serves to keep up the discharge of pus.

Cerebral abscess in nearly half the number of cases is due to chronic suppuration of the middle ear. No case, it is stated, has ever been observed of cerebral abscess as a result of acute aural disease, although instances have been recorded of suppurative meningitis consequent on simple catarrh of the tympanic cavity, and alarming cerebral symptoms occasionally present themselves in the course of acute inflammation of the middle ear. The chronic aural suppuration that gives rise to cerebral abscess does not affect the external, and primarily not even the internal ear, but occurs in the middle ear as a result of *otitis media chronica purulenta*. It is usually of long standing, and in many cases a sequence of some eruptive fever as scarlatina or variola. The suppuration affects the tympanic cavity with its accessory air-cells, and it may, or may not, be associated with purulent and ulcerative affections of the surrounding bones. The cerebral abscess in most cases lies at some distance from the seat of the primary suppuration, and is separated from the ear by layers of unaltered brain tissue. With few exceptions it exists either in the temporal lobe of the cerebrum or in a hemisphere of the cerebellum, the first mentioned locality being the more frequent one. Of seventy-six cases of cerebral abscess from aural suppuration collected by Dr. Barr, of Glasgow, the middle lobe of the cerebrum was affected in fifty-five, about 73 per cent., and the cerebellum in thirteen, about 17 per cent. It may be laid down as a general rule that when the upper portion of the petrous bone is diseased, the temporal lobe is liable to be the seat of the abscess, and that the cerebellum, on the other hand, is thus affected in cases of suppuration and caries of the mastoid process.

As instances of the less frequent dependence of abscess in the brain on intracranial suppuration not due to aural disease, Von Bergmann alludes to cases observed by himself of purulent collections in the occipital lobe and in the cerebellum in association with perforating tuberculosis of the occipital bone, and in the frontal lobe in association with caries of the frontal bone and the cribriform plate, and with ulceration within the nose.

The symptoms of cerebral abscess, whether this be due to injury or to chronic suppuration within the cranium, may be arranged in three groups. The first of these includes the symptoms common to all kinds of deep-seated suppuration ; the second the symptoms indicative of increased intracranial pressure and the disturbing intracranial displacement ; whilst the third group consists of the localisation

symptoms corresponding to the situation of the abscess. The symptoms of the first group, particularly fever, are of great value in cases of traumatic abscess of the brain, but do not assist the diagnosis when the abscess is due to suppurative otitis. These symptoms, in cases of cerebral abscess, are usually associated with headache, the earliest sign of increased intracranial tension. This headache is persistent, but varies in intensity, and undergoes a regular exacerbation during every febrile period. It is intensified by any cause—indulgence in alcoholic drinks or bending of the neck, for instance—of increase or obstruction of the intracranial circulation, and, in many cases, especially those of abscesses in the temporal lobe and cerebellum, is strictly localised, and corresponds very closely to the seat of the deposit. As it may be at once set up or intensified by tapping this part of the skull, percussion should always be practised in suspected cases. The other compression symptoms are seldom so well marked in cerebral abscess, except in its terminal stage, as they are in cases of tumour. In cases of abscess these symptoms are often paroxysmal, sometimes disappearing for a time, whilst, in cases of tumour, they present a steady and progressive course. Choked disc, which is an almost constant sign of tumour, occurs in but a small proportion of the cases of abscess. Localisation symptoms afford much help when the abscess is situated near or in the motor region of the brain, but very little, on the other hand, when its seat is the frontal, temporal, or occipital lobe. If the cortex of the brain remain intact, a deep-seated abscess may increase to a considerable size without causing any localisation symptoms.

The special indications of cerebral abscess, according to its situation in this or that region of the brain, and also the great diagnostic difficulties when the frontal lobe or the cerebellum are thus affected, are fully described by Von Bergmann in instructive analyses of recent cases of trephining successfully treated by himself and other surgeons. In concluding this portion of his paper, it is held that in the presence of the many published records of successfully diagnosed and opened cerebral abscess, the difficulties in the diagnosis of this affection ought not to be regarded as insuperable. He would not maintain that every abscess in the brain should be diagnosed, but that more frequently than is the case at the present time this affection might and ought to be made out. Operative treatment, it is held, should be restricted to those cases in which a diagnosis can be made, that is, to cases in which all the indications are presented that justify the diagnosis of any deeply seated abscess in the brain. In other words, the operation should be performed only in the so-called typical cases, and then only when the etiological factor agrees with the other diagnostic indications. It is not required from the surgeon to diagnose in every case an abscess in the cerebrum or cerebellum, but to avoid leaving unopened those abscesses which our present clinical knowledge permits us to recognise. In seeking for the abscess in the brain, Von Bergmann prefers the use of the knife to that of a needle and syringe. The latter apparatus is uncertain and dangerous in its action, whilst with regard to the use of the knife, modern physiology has taught us the relative indifference of a deep incision into the medullary tissues of the hemispheres of the brain. With regard to the risk of much loss of blood, it is stated that when the incision does not extend into the brain for a distance of more than four or five centimètres, and does not go through the roof of the lateral ventricle, most of the bleeding takes place from the vessels of the pia mater, and very little from the cerebral substance itself.

It is pointed out that a successful operation for cerebral abscess will not prevent the development of consecutive disturbances and lesions. When during the suppuration nerve tracts have been destroyed and communications interrupted, secondary degeneration will occur in those nerves that have been cut off from their centres, and there will also be diffuse degeneration of the connective tissue of the brain, radiating far beyond the seat of the scar. Such remote results of cerebral abscess, however, though possible, are not inevitable, as large cicatrices have often been found after death in the brains of subjects, who during a long life had enjoyed the best bodily and mental health.

Professor von Bergmann takes a much less hopeful view of the future of operative interference in cases of cerebral tumour. Whilst operations for the removal of large cranial tumours pressing on the brain have been attended in most instances by brilliant results, those for the removal of tumours seated in the brain have almost invariably proved unsuccessful. The doubts as to the future of cerebral surgery in the treatment of this class of cases are based on the difficulties of diagnosing the seat and size of the tumour in most instances, on the too frequent absence of conditions favourable to surgical interference, as shown by Dr. Hale White's record of one hundred *post mortem* examinations, and, finally, on the dangers of the operation. These difficulties consist in hæmorrhage and the development of rapidly fatal cerebral œdema. The former, particularly when the blood comes from the divided vessels of the pia mater, may be overcome by carefully plugging the wound with iodoform gauze, but extensive incision of the brain and the division of a large blood-vessel are serious injuries, and if the surgeon cannot help himself by speedy ligature or efficient plugging, will soon see his patient in a very serious condition. The application in the depths of the brain of any means of arresting the bleeding is very often met by insurmountable difficulty. Cerebral œdema is the result of removal of a large portion of the skull. This removal of bone leads, in the exposed portion of brain, to the state of hyperæmia that usually follows in this organ the cessation of regular and ordinary pressure. The vessels that are the first to become dilated after such pressure has been taken off are the veins, and the venous hyperæmia thus produced leads to cerebral œdema. The occurrence of this condition of œdema is, moreover, favoured by the reduction of arterial tension due to the loss of blood during the operation, by the interruption, or at least the retardation of the return blood-current which must result from any interference with a large venous channel, and again by the disturbance caused and maintained by the tumour in the distribution and reciprocal relations of the fluid components of the contents of the skull. Von Bergmann regards the operation of cerebral tumour as one of restricted range, and would reserve it for some few clearly diagnosed cases. Even in such cases it is to be regarded at first as only an exploratory operation—that is to say, one practised for the purpose of more direct observation. Not until after the skull has been opened, it is held, can the surgeon make out whether the growth be accessible or not, and whether, supposing it to be

accessible, its removal may not be interdicted by reason of its size, its relations to surrounding parts, and its extensive infiltration in the brain. The surgeon, therefore, should not hesitate to discontinue his operation at any stage. Provided this be borne in mind, operative interference in cases of cerebral tumour diagnosed to be seated at some accessible region of the brain is justifiable, and indeed demanded, if the surgeon be consulted before the terminal stage of the affection has been reached, and the occurrence of deep coma has abolished all hope.

In the chapter on the surgical treatment of epilepsy reference is first made to the unsatisfactory character of most of the published cases with regard to the results of operation. In many instances the assertion that a definite cure had been obtained was too premature, and in others, Von Bergmann thinks, it would seem as if the authors had meant by recovery a fortunate survival of the patient after the operation, and not any relief from the disease to which such treatment had been applied. Whilst the statistics relating to the surgical treatment of epilepsy are passed over as untrustworthy, the records of some few cases in which it was proved by frequent observation that the patients remained quite well after intervals of many years have led Von Bergmann to inquire into the conditions under which surgeons might hope in future to operate on epileptics with better chances of success. The epileptic condition due to any injury or irritation of a peripheral nerve should, he holds, be regarded as a general form of epilepsy quite as much as that produced in the rabbit in Brown-Séquard's experiments by injury to the sciatic nerve. Nothnagel has collected numerous cases of epilepsy supposed to be due to the compression of a peripheral nerve by a tumour or a scar, and Von Bergmann refers to five cases of like character observed by himself. It is shown, however, that traumatic epilepsy is due far more frequently to injuries of the cranial vault than to any interference with the nerves in the trunk, neck, and extremities. According to the results of the most recent physiological investigation, the anatomical seat of those disturbances by which epileptic attacks are induced is hardly likely to be found in any other region of the brain save that part of the cortex in which lie the motor centres. The neurosis epilepsy may be regarded as an affection of the cerebral cortex and of a distinct portion of this—the motor centres. In what this affection consists still remains doubtful; but cases accumulate in which in this particular zone—either the brain itself or its membranes—pathological changes have been found, especially in epileptics who had become so after an injury to the skull. The cortex of the brain suffers in most severe injuries to the cranial vault, especially in blows applied to a relatively small surface. In consequence of the elasticity of the skull, a curved portion may be flattened or depressed without undergoing any solution of continuity, and after the impact return at once to its former position; but at the same time the subjacent portion of the surface of the brain, together with the membranes, are subjected to injury. Epileptic attacks due to disease or to any kind of disturbance of a limited and strictly circumscribed part of the motor zone of the cortex present such a special character as to be readily recognisable as such, that is to say, as the results of irritation of a small but definite region of the cortex. By what special anatomical changes this irritative condition may be recognised, at present remains unknown to us. All that the knife of the pathologist or surgeon has as yet revealed has been a set of coarse and anatomically demonstrable changes, such as, apart from changes in the bone, close adhesion of the motor zone of the cortex to the superjacent portions of the meninges, a wide-meshed cystoid cicatrix occupying a shallow cupped depression on the surface of the brain, thin, rust-coloured layers of connective tissues and thick and tough sclerotic discs lying within or on the cortex; finally, depressed splinters of the internal table or foreign bodies of different kinds introduced at the time of the injury. To Horsley is awarded the merit of having been the first to apply in surgical practice the results of recent physiological investigation and of the clinical researches of Hughlings Jackson. According to Von Bergmann it is not so much the introduction of the antiseptic method as the new departure given by Horsley to the subject of trephining for traumatic epilepsy that has opened up better prospects for the operative treatment of this terrible affection. In dealing with such cases the surgeon, taught by the results of experiments and clinical observation, that the seat of the disease is the cortical substance of the brain, and that this constitutes the substratum of the disturbances by which the convulsive attacks are excited, should follow the practice established by Horsley of removing from the cortex, by as complete an extirpation as possible, all traces of morbid change that may be found there. Whilst formerly the operative treatment consisted merely in removal of the cicatrix from the scalp or bone or, at the most, in division of any adhesions between the dura mater and the bone, it has been proposed as a further step that the sac of the dura mater be opened up to such an extent as to reveal the seat of the disease and to permit its complete removal. Such operation, however, Von Bergmann holds, should not be performed unless the surgeon has good reasons for concluding that there is a palpable and therefore removable lesion of the cortex. Sufficient reasons for this conclusion are, it is stated, presented only in those cases in which the convulsions commence, spread and finally become general in the same way as they do in animals submitted to experiment. The success of such treatment has been proved by the results of Horsley's operations and of experiments on animals by Munk and Heidenhain, who by extirpation of the motor zone on one side of the brain arrested convulsions of the opposite side of the body. In a *résumé* of his views on the surgical treatment of epilepsy, Von Bergmann, after insisting on a clear distinction between the cases which present the complete and uncomplicated form of traumatic cortical epilepsy, and those in which the chief characters of this affection are wanting, states that whenever the surgeon has had brought under his notice a case of well-marked and decided Jackson's epilepsy after head injury, he may assume the existence of an appreciable lesion of the cortex, and a macroscopic and tangible morbid centre. He has thus submitted to him a definite problem—the removal of the diseased structure and with it that portion of the cortical area, the irritative condition of which is manifested by the action of the muscles that are primarily or alone convulsed. To solve this problem it is pointed out is the work of modern surgery. That it is soluble has been shown by the results of operations that

have already been performed. Further experience, it is held, must be gained before surgeons can prove that such treatment deserves a permanent place amongst the resources of their art. The proposed treatment of epilepsy is based on the results of physiological observation and experiment which constitute the soil in which all therapeutical efforts are rooted. If the extirpation of an irritated cortical area has good results in experiments on animals, it must prove of service in the hitherto incurable cases of an analogous condition in man. It is held, however, that real progress in this branch of surgery can be made only by cautious and prudent steps, and that no encouragement ought to be given to those surgeons who, relying on the diminished risks of operative procedures, use the knife without much consideration and simply with the chance of doing some good.

In conclusion, Von Bergmann alludes to certain epileptoid conditions following injury, such as epileptiform vertigo and the so-called 'psychico-epileptic equivalents' in which irregular attacks of mental disorder alternate with attacks of typical epilepsy. In cases of this kind, as no indications are ever afforded of a definite starting-point of the convulsions, there ought not, it is held, to be any resort to operative measures.

W. Johnson Smith.

Article 1034.

MËËROVITCH ON THE BACTERIOLOGY OF ERYSIPELAS.

Dr. I. I. Mëërovitch, senior physician to the Ekaterinodar Town Hospital, has published a very important contribution to the bacteriology of erysipelas (*St. Petersburg Inaugural Dissertation*, 1887, pp. 130), based on his extensive researches in Professor A. F. Batalin's botanic laboratory and in Professor M. I. Afanasïeff's bacterioscopic laboratory in St. Petersburg. His extremely interesting and carefully written monograph consists of six chapters, of which the first two are devoted to an exhaustive critical review of the literature of the subject both before and after Fehleisen's epoch-making discovery of the pathogenic microbe of the disease. The remaining four divisions of the work embody the author's personal observations and experiments undertaken to verify Fehleisen's statements. The following is a brief, and yet detailed, summary of Dr. Mëërovitch's rich results.

I. *Observations on Patients Suffering from Erysipelas.*—Thirty-one cases of traumatic and idiopathic erysipelas of various regions of the body (mostly of the face and head) were examined bacterioscopically. The material (for the microscopical examination, cultivation, and inoculation) consisted of (*a*) four or five small pieces of the skin (of the size of a grain of lentil), excised in every one of the cases either from the region affected or within one or two centimètres from the latter; (*b*) the serum from erysipelatous bullæ; (*c*) the parenchymatous fluid from the cutaneous region affected; (*d*) the blood from remote (healthy) regions; (*e*) pus from intercurrent abscesses, bursitic and synovitic effusions, &c.; (*f*) internal organs (liver, spleen, kidneys) in three of five fatal cases. The outcome of this group of observations may be given thus: 1. The skin affected with erysipelas invariably contains great numbers of a characteristic streptococcus which is always present also in the surrounding apparently sound skin as far as 1, 1·5, and sometimes even 2 centimètres beyond the margin of the redness. Within this zone as well as about the margin the microbe is met in pure cultures, while the more central parts (that is, of an older standing) contain, beside the streptococcus, varying numbers of other micro-organisms. The number of still viable streptococci lessens with the subsidence of the redness. 2. The streptococcus can be obtained always, further, from the parenchymatous fluid of erysipelatous tissue, and from the serum of recent erysipelatous bullæ. In the bladders of older standing the microbe is found to be either largely mixed with those of other species penetrating through the dead cuticle, or absent altogether ('crowded out by proliferating foreign micro-organisms'). 3. In very grave and fatal cases the streptococcus occurs also in the patient's blood, though always in very scanty numbers. [Of twenty-two cases where the blood was examined, the microbe could be detected only in three, of which two ended fatally about thirty-six, and twenty-four hours afterwards. The third case was that of erysipelas complicating an enormous phlegmonous inflammation of the whole right upper limb, contracted from an accidental injury in the anatomic theatre. A repeated bacterioscopic examination of the patient's blood commenced to give positive results simultaneously with his state growing alarmingly worse; it ceased to be successful as soon as a steady improvement had set in. In all the twenty-two cases the blood was extracted from a finger.] 4. The streptococcus is almost invariably found in pure cultures, in abscesses, and synovitic and bursitic effusions sometimes accompanying erysipelas. 5. It can be obtained further from internal organs in fatal cases. [As a matter of fact, the coccus was found—partly in pure cultures, partly in mixture with other micro-organisms—in all organs in every one of the three lethal cases examined by the author.] 6. The streptococcus of erysipelas is characterised by the following morphological and biological features. *a.* It grows very readily in a slightly alkaline meat bouillon at 35° to 37° C., the medium becoming turbid even after ten or twelve hours. After twenty-four hours' growth there are seen enormous numbers of chains consisting of fifteen or twenty links, while after forty-eight hours there appear streptococci composed of fifty, 100, and more spheric cocci, some of which, situated at varying distance one from another, present relatively considerably larger dimensions and darker or sharper contours. Those large globules are thought to be nothing else than arthrospores. In three or four days the culture medium becomes quite clear and transparent, the whole culture sinking to the bottom. The precipitate contains, side by side with long chains, more or less short ones, the arthrospores being still more marked than in younger cultures. The culture preserves its vitality for about four or five months. *b.* On meat peptone jelly in a test-tube, kept at 20° C., usually about the third day there appear along the track of the needle very minute points, which gradually increase in number, to form, in time, a pointed cylinder, measuring 0·2 to 0·3 centimètre in diameter, and consisting of the said individual, never coalescing small colonies. Most rapidly the growth proceeds in a 2 or 3 per cent. jelly. When the gelatine cultures are liquefied by heat, shaken thoroughly and

again solidified, the whole medium is found in two or three days to be studded with minute point-like colonies, which in time grow somewhat larger, but still remain extremely small. When a tube gelatine culture is liquefied, and subsequently spread over plates to be kept at 20° C., after three or four days there can be seen (through a magnifying glass) very minute round spots scattered over the whole plate, their contours are slightly uneven, but still sharply marked. At first the colonies are of a greyish-yellow colour, and finely granular, later on they assume a dark grey and even a cinnamon-brown colour ('apparently simply from an increasing thickness of the colonies'). The microbe does not liquefy jelly, and does not form any layer on the surface. *c.* On meat peptone agar-agar in test-tubes, kept at 35° to 37° C., the streptococcus grows very quickly, though also only along the track of the needle. Even after twenty-four hours the whole inoculation line is found to be considerably enlarged, uneven, and traversed with numerous trabeculæ, the colonies rapidly coalescing to form a compact mass. Given a plate agar-agar culture kept in thermostat, even after twenty-four hours there appear colonies as large as the jelly-plate ones of five or six days' standing, while after forty-eight hours' growth they attain each the size of 0·2 to 0·3 millimètre in diameter. Their colour and granular appearance are identical with those of the gelatine cultures, but their size and outlines present comparatively many individual variations, a spindle-like shape being most common. *d.* Both the gelatine and agar-agar colonies consist exclusively of chains which, however, are much shorter than in the case of bouillon, the number of links never surpassing twenty or twenty-five, while the links themselves appear to be also somewhat smaller than the bouillon ones. *e.* The streptococcus is exceedingly sensitive to the reaction of the culture medium. It grows most readily in a slightly alkaline medium, less so in a neutral one, while its growth at once ceases after the addition of a most trifling quantity of an acid to the medium kept at the ordinary room temperature. At 35° C., however, the microbe can grow also in a slightly acid medium. *f.* High temperatures destroy the vitality of the microbe. A half-an-hour exposure of the culture to the action of the temperature of a steam apparatus is sufficient to kill all the members of its colonies; but even the temperature of 50° or 60° C. seems to act with nearly as much power.

II. *The Pathogenic Power of the Streptococcus of Erysipelas.*—In all, eighty-three experiments on forty-seven rabbits and seven on dogs were carried out in order to study the pathogenic properties of Fehleisen's coccus. For controlling purposes, Friedlaender's pneumococcus, the staphylococcus aureus and albus, and the micrococcus prodigiosus were inoculated in thirteen cases (rabbits); nothing like erysipelas could be observed. The pure culture of the streptococcus was inoculated in sixty-two cases (rabbits), in forty-four of which typical erysipelas developed. Of eighteen unsuccessful cases, in seven the animals had suffered from an erysipelatous attack one or two months before the (second) inoculation. The results of this series of experiments may be condensed as follows:—1. When inoculated (by means of puncturing with a needle, or slightly scratching with a scalpel) into the superficial cutaneous layers in rabbits, the streptococcus gives rise to a cutaneous affection which is quite identical with human erysipelas, and is sometimes associated with the development of bullæ, the disease usually lasting from four to eight days, but sometimes longer. Generally speaking, rabbits are very sensitive in regard to the streptococcus. [In fact, of all the rabbits experimented upon by the author, only one remained free from any cutaneous erysipelatoid phenomena, in spite of repeated inoculations.] 2. The microbe is detected *a*, in the diseased area as well as in the apparently healthy surrounding zone; *b*, in the serum of the bullæ (sometimes even in a pure culture); *c*, in the animal's blood in all fatal cases, the microbe appearing then about from 6 to 15 hours before the rabbit's death, and sometimes in non-fatal cases, too; *d*, in all organs and tissues of the body in fatal cases. 3. It is extremely probable that the erysipelatous animal's blood invariably contains the streptococci, though in very scanty numbers. 4. The issue of the disease depends upon the number of the microbes introduced into the animal. The same may be said in regard to the amount of local infiltration which is invariably observed in all cases of the inoculation. 5. In fatal cases, the *post mortem* examination reveals only those morbid anatomic changes which are observed in other febrile diseases, such as acute parenchymatous processes in the liver, spleen, and kidney, &c. 6. An erysipelatous attack makes the animal invulnerable in regard to the inoculation for one or two months. 7. The facts just mentioned show that erysipelas represents a general constitutional disease, and not a local cutaneous affection, as Fehleisen teaches. The disease retains its apparently local character as far as the animal's system remains sufficiently strong to overcome the streptococci penetrating into the general circulation from the local focus. But when the organism is or becomes so weak as not to be able to digest (*sit venia verbo*) the invading microbes, the latter rapidly multiply in the animal's blood and parenchymatous organs to bring about a fatal issue. 8. The subcutaneous injection of a pure culture of the streptococcus of erysipelas in rabbits, and especially in dogs, gives rise to an intense and prolonged fever with a local flat induration, which passes either into resolution or into a circumscribed suppuration sometimes accompanied with circumscribed purulent metastases. The intramuscular injection produces a severe and long fever, and a local diffuse suppuration spreading under the fasciæ along the intermuscular interstices. The injection into joints causes a purulent inflammation of the articular cavity and of adjoining sheaths of tendons, the process spreading both upwards and downwards from the joint and sometimes being associated with purulent metastases in the liver. The intraperitoneal injection brings about peritonitis of a serous variety passing subsequently into a sero-fibrinous or purulent one. The intravenous injection of large amounts of the microbe gives rise to a severe fever, ending in death in about 2, 3, or 4 days. Only very small doses ($\frac{1}{20}$th of a syringeful) are tolerated by rabbits, the only symptom being then a slight febrile rise of the temperature. In all cases, even in such ones where enormous quantities of the streptococcus are introduced directly into the blood, the cocci disappear therefrom very rapidly (in 5 or 6 hours). 9. The internal administration of the pure culture to rabbits with perfectly healthy gastro-intestinal tracts does not cause any symptoms whatever. Yet when a catarrhal state has been previously induced, the subsequent internal use of the cultures gives rise to an intense and extensive gastro-intestinal

catarrh accompanied by fever, and sometimes by sero-purulent peritonitis, the issue being either recovery or death. 10. The streptococcus of erysipelas can pass from the maternal organism into that of the intra-uterine fœtus [as is proved, beyond any doubt, by the fact that Dr. Mëërovitch found the streptococci in every one of four fœtuses which had happened to be present in a rabbit of his, inoculated by the intravenous injection of the microbe. The fact is the more interesting that Kaltenbach, Runge, and Stratz sometime ago published several cases of intra-uterine erysipelas; *vide* the *Centralblatt für Gynæcologie*, Nos. 44 and 48, 1884; and No. 11, 1885.]

III. *Comparative Experiments with the Streptococcus of Erysipelas and the Streptococcus Pyogenes.* As is well-known, Fehleisen lays great stress on the point that his erysipelatoid coccus is able to produce only genuine pure erysipelas, but no suppuration. Many other observers, however (Biondi, Passet, Bumm, Von Eiselsberg, &c.), have arrived at the conclusion that the erysipelatous streptococcus is quite identical in all regards with the streptococcus pyogenes. Dr. Mëërovitch's experiments, sketched *sub* II., seem to point in the same direction. To elucidate the matter still further, Dr. Mëërovitch has undertaken a special series of comparative experiments on rabbits, which he inoculated, on one side, with pure cultures of the streptococcus of erysipelas obtained from the patients with a typical uncomplicated erysipelas, and, on the other hand, with pure cultures of the streptococcus pyogenes obtained from the patients with purulent bronchitis, suppurative bursitis, and subinguinal lymphadenitis. In view of the fact that this important question is still *sub judice* and that, in absence of 'definite evidence in favour of the unity of these organisms,' even such bacteriological authorities as Mr. W. Watson Cheyne, are still 'inclined to uphold the specific character of the coccus of erysipelas' (*vide* the *British Medical Journal*, Feb. 25, 1888, p. 406) we adduce a somewhat more detailed account of the results of Dr. Mëërovitch's experiments concerning the subject. 1. The streptococcus pyogenes from a purulent bronchitic sputum was inoculated (by scalpel-strokes) on both of the ears in four young and strong rabbits. In all, after from 36 to 48 hours, there appeared fever, redness of the ears with dilatation of blood-vessels, the symptoms subsiding twenty-four hours later in three of the animals, while in the fourth rabbit a typical erysipelatous attack of seven days' duration followed, any suppuration being absent all through. 2. The streptococcus of erysipelas was inoculated exactly in the same way in the first three rabbits; all the animals remained perfectly well. 3. The streptococcus pyogenes from bursitis was inoculated (by needle punctures) in five young rabbits, of which one remained quite well, in two the inoculation was followed in thirty-six hours by fever and aural redness which disappeared twenty-four hours later. In the remaining two, in thirty-six and forty-eight hours typical erysipelas developed; it was accompanied by a strong fever and followed by desquamation, the animals recovering in five and seven days. 4. The streptococcus of erysipelas was injected under the aural skin in four rabbits, in one of which erysipelas with small abscesses at the puncture-spots followed, the animal dying on the eighteenth day from extreme exhaustion. In the other three fever and local suppuration appeared; the animals made a good recovery. 5. The streptococcus pyogenes from lymphadenitis was inoculated (by punctures) on the ears in three rabbits. In one, typical erysipelas of six days' duration ensued; in the other only a moderate fever of one and a half to two days' standing. 6. The streptococcus of erysipelas was inoculated (by punctures) on the ears of three rabbits. No results beyond some slight local reaction. 7. The streptococcus pyogenes from lymphadenitis was injected under the skin of the back in four rabbits and gave rise to a strong fever in all, death in three days in one, local flat indurations in two, and suppuration in the fourth. 8. The streptococcus pyogenes from bursitis was inoculated (by scratches) in the ears of two rabbits. One of them died four days later, while in the other there appeared a slight local infiltration with a small bulla and diarrhœa. 9. The streptococcus of erysipelas was injected into the femoral muscles of a rabbit. There appeared severe fever and diarrhœa with emaciation, great swelling of the whole limb and an enormous intermuscular phlegmon, the animal dying on the sixth day. Dr. Mëërovitch's general deductions from this series of experiments are to the effect (*a*) that both the streptococcus of erysipelas and streptococcus pyogenes, being inoculated on the skin, produce erysipelas, while the inoculation of either into the subcutaneous or intermuscular cellular tissue gives rise to suppuration; (*b*) that the streptococcus of erysipelas is quite identical with the streptococcus pyogenes in all regards; and (*c*) that erysipelas, certain progressive phlegmons and pyæmia (at least pyæmia following phlegmonous erysipelas) are caused by one and the same pathogenic microbe.

IV. *Experiments on Toxic Products of the Streptococcus of Erysipelas.*—Finally, Dr. Mëërovitch has succeeded in showing that the streptococcus of erysipelas, when grown on triturated fresh raw meat, elaborates a toxic substance which gives certain alkaloid reactions and produces in animals (dogs and rabbits) drowsiness, dilatation of the pupil, muscular weakness and diarrhœa, the poisoning ending rapidly in death. V. IDELSON, M.D.

ARTICLE 1035.

ON A NEW AND ONLY WAY OF RAISING THE EPIGLOTTIS.*

THE epiglottis, as regards its functions, from the time of Plato to that of Magendie, was conspicuous as a subject of dispute. Respecting the epiglottis as a factor in apnœa on the contrary, that which was taught at the first has been taught ever since, and is to-day everywhere the rule of universal practice. This teaching is:—1. That in apnœa the epiglottis falls backwards and closes the glottis. 2. That the elevation of the epiglottis is the first thing in order and in importance; as without this respiration, whether natural or artificial, is impracticable and the result fatal. 3. The only way by which the epiglottis can be elevated is by means of the tongue; as the tongue is brought forwards, the epiglottis is moved upwards.

As a summary of the results of prolonged and re-

* Read before the Medical Society of London, October 1888, by Benjamin Howard, A.M., M.D., F.R.C.S.Ed., formerly Lecturer on Surgery in the University of New York, Professor of Surgery and Surgeon at the Long Island Medical College, Brooklyn, New York and Professor of Surgery in the University of Vermont.

peated investigations and experiments, the author proposed to show :—

1. The effect of traction of the tongue ; what is done by it, and what is not done by it.

2. A new and only way of raising the epiglottis.

3. Some important changes in the relation of certain parts of the upper air-passages to each other induced by complete extension of the head and neck.

By the aid of a series of diagrams, made by the author from sketches he had made from nature, he then showed :—

1. Contrary to general belief, traction of the tongue, however and whatever the force employed, does not and cannot raise the epiglottis as supposed —because : *a*. The tractile force supposed to be exercised upon the epiglottis is arrested chiefly by the frænum linguæ, and, through the muscular fibres within, is expended upon the inferior maxilla, into the genial tubercles of which they are inserted. *b*. The surviving force is expended almost entirely upon, and intercepted by, the anterior pillars of the fauces. *c*. For any tractile force which might survive, a continuous and sufficient medium for its transmission to the epiglottis is wanting. *Proof.* The glosso-epiglottidean fossa being filled with water and the subject being so placed that the floor of that fossa is formed in part by the fallen epiglottis itself, traction upon the tongue, however forcible, does not cause the water to be spilt.

As the author had just been publishing an improved way of seizing the tongue, for the above purpose, this discovery was a great disappointment and a great dilemma, as no other way of raising the epiglottis seemed to have ever been contemplated. After a search, by no means easy nor short, the author discovered :—

2. The only way by which the epiglottis can be certainly raised, which is by extension of the head and neck. By this means its elevation is instant and complete.

Because : *a*. By a three-linked chain, of which the hyo-epiglottic ligament is the lower link, the body of the hyoid bone the central link, the combined genio-hyoidei and mylo-hyoidei muscles the upper link, the epiglottis is so coupled to the inferior maxilla, just where it has its greatest range of motion, that above a certain point, as the lower jaw is moved upwards, the epiglottis instantly, irresistibly, and inevitably moves upwards exactly in unison till it is erect. The customary wrenching asunder the clenched teeth, in proportion as it depresses the body of the lower jaw, antagonises a distinct effort of nature to maintain the elevation of the epiglottis, and specially favours, sometimes helps, sometimes greatly increases, its depression.

The author indicated on his diagrams the way in which other anatomical causes of obstruction, in addition to the epiglottis, respectively bar the airway, for all of which he submitted a positive and complete remedy ; and showed :

3. The way in which, by extension of the head and neck, carried to the utmost completeness, the backward fallen tongue, the velum palati, and uvula are all simultaneously shifted from the airway, and the entire pharynx is enlarged throughout, as follows : *a*. The tongue, the dorsum of which before fell by gravitation upon the then horizontal posterior wall of the pharynx, falls upon the now horizontal arch of the palate. *b*. The velum palati, by means of the great tension of the palato-pharyngei muscles, is pulled away from the posterior wall of the pharynx, the entire membrane being stretched tightly forwards and downwards behind part of the dorsum of the tongue, forming a partition which helps to shut the tongue out of the pharnyx and into the mouth where it belongs, and with part of the dorsum forms the anterior wall of a now post-oral airway thus created and maintained. *c*. The pharynx, anteriorly, is stretched far forwards by the extremely tense sterno-thyroidei muscles acting through the thyroid cartilage. By the genio-hyoidei and mylo-hyoidei muscles acting through the os hyoides, the base of the tongue and the velum palati are shifted forwards in the manner already described, the posterior nares being shifted by the extension of the head by its occipito-vertebral articulation about sixty degrees. Posteriorly, the wall of the pharynx is shifted back its whole length by the extension of the cervical vertebræ upon each other, in all about thirty degrees, the extension being particularly great just opposite the glottis. Thus the upper airway, which before was a tortuous, angular, flaccid canal, barely and, if at all, uncertainly permeable, is made an enlarged, firm, but slightly curved tube, free throughout, from the glottis to the nares.

THE WAY TO MAKE COMPLETE EXTENSION OF THE HEAD AND NECK.

Having, by bringing the patient to the edge of the table or bed, or by elevation of the chest, provided that the head may swing quite free, *with one hand under the chin and the other on the vertex, steadily but firmly carry the head backwards and downwards. The neck will share the motion, which must be continued until the utmost possible extension of both head and neck are obtained.*

Sometimes a slight extension and elevation of the chin merely will at once check stertor, or irregularity of breathing ; but the extension, which can in no case do harm, should be always rather more than rather less than appears necessary. It should never be forgotten, however, that the full effects of extension as above described can be secured with certainty only by making the extension complete as directed.

That the customary pulling forward of the tongue is followed by relief, the author admits to be true in some cases, but in some cases only ; and then it is not by the raising of the epiglottis. In the stage and the case in which the backward-fallen tongue happens to be the chief cause of obstruction, by pulling forward the tongue that cause of obstruction is removed—nothing more. There are other cases and other stages in which it does no good at all. From over 13,000 fatal cases of asphyxia in England alone in the last three years, the author selected over 100 unequivocally attributed to administration of anæsthetics, and in which, in every probability, the tongue was skilfully pulled forward in the recognised way—but they died. The author would be sorry to pretend to state of what they died, but he could not avoid the belief that the epiglottis in each case was not raised, but continued unlifted till death was complete. It could but be thought a happy feature that instruments, the delays in getting them and in using them, the occasional violence, and the invariable wounding with them, yet the utter helplessness without them, are in the procedure submitted so entirely superseded.

It is not pretended that never before had the epiglottis in this way been lifted. For more than twenty years the author himself had published and

illustrated a certain position in the treatment of apnœa. This position inevitably opened the epiglottis; but he did not know it. In the old-fashioned swinging by the feet; in the *tête à bas*; the inversion of the entire body; the chucking under the chin; the jerking the angle of the jaw; in each of these the good done, and which was the only and all-sufficient reason for the habit, is an interesting corroboration. Each tended to raise the epiglottis, but in each case the operator did not know it. Further corroboration is in the familiar position instinctively assumed by the croupous, the diphtheritic, the asthmatic, the dying.

A diligent search has failed to discover a single record, in which any observer states that, by pulling forward the tongue, he had seen the epiglottis raised; nor is there a single reference to anybody who is supposed to have seen it. On the contrary, the facts now submitted have all been many times examined, and have been verified by distinguished anatomists at demonstrations made by the author at the Royal College of Surgeons of England, at King's College Hospital, and at Guy's Hospital, London, and at the hospitals La Pitié and Salpêtrière, Paris.

The position of complete extension enables certain operations on the throat and pharynx to be done in anæsthesia without the usual peril from drainage into the trachea. This Dr. Howard believes to be the only way of raising the epiglottis, for, except by pulling forward the tongue, no other way appears to have ever been contemplated.

The sum of what has been submitted is :—

1. That, contrary to universal belief, traction of the tongue cannot raise the epiglottis.

2. By sufficient extension of the head and neck, whether by volition, instinct, reflex action, or by the effort of another; whether in the healthy, the dying, or the dead; the epiglottis is instantly, and beyond prevention, made completely erect.

3. By complete extension of the head and neck—the tongue and velum are, as respiratory obstructions, simultaneously with the epiglottis, removed; and, without a moment's delay, the entire airway can be straightened, enlarged, and be made free throughout, by the nearest person.

4. If syncope happens to be the chief factor, or only incidental, this also gets thus the quickest, and best corrective.

The author expresses the hope, as he has the confident belief, that the facts submitted will be found to be permanent additions to our means of averting death.

Article 1036.

BREUNIG ON THE TREATMENT OF DIPHTHERIA.

Dr. Gerhard von Breunig, of Vienna, recommends cauterisation for diphtheria (*Med. Chirurg. Centralblatt*, No. 40, 1888). Long sticks of caustic are apt to break, and must therefore be avoided; but neither may the stick be too short, else it will not reach the lowest part of the ulcer. The best plan is to fasten a piece, from two to three centimètres long, into a quill with thread and sealing-wax. Paint well all the diseased spots every hour with acidi hydrochlor., dil. 4 parts in syr. mori 20 parts, to which may be added, if required, chlorate of potass., &c. Acidulous drinks (lemonade, acid. hydrochlor. vel phosph., dil. in sweetened water) must be frequently swallowed. Cold compresses, fomentations, or hot poultices must be applied to the throat. Immoderate swallowing of ice pills tends to induce catarrh of the stomach. Quinine (preferably with hydrochloric acid) must be given twice in twenty-four hours. The diet must be simple. If there is fever let it be soup, milk, and, if necessary, wine; in the absence of fever consult the appetite, and give solid food. Should the digestion be disturbed, give an emetic (pulv. rad. ipecac. 1·50, with antim. tart. 0·02), even if there are only signs of reaction, and now and then the following mixture :—Antim. tart. 0·04 in aq. destill. 20·00, ten to fifteen drops frequently, and even for several consecutive days if there is delay in the ejection of the diseased parts. There is an unjustifiable prejudice against emetics at present, and they are pronounced to be specially unsuitable in diphtheria because the coating is not, as in croup, *on* the mucous membrane, but exudes from the tissue of the membrane. But this accretion must be in some way ejected, and to accomplish this there is no safer means than expectorants and emetics. These have the further advantage of preventing the diphtheritic shreds from slipping downwards to infect the mucous membranes of the trachea, pharynx, and stomach. Breunig insists on the importance of remembering that emetics composed solely of antimony, even in very strong doses (*e.g.* 0·02 to a powder, or 0·40 to 20·00 water given in doses of from 10 to 15 drops), though so agreeable on account of their tastelessness, are not so efficient as when they are accompanied now and then with a few doses of pulverised ipecacuanha, which is possessed of far greater alterative properties. At any rate, it is clear that in this way the accretion that has been loosened by cauterisation is finally torn away and ejected. If the doses are not sufficiently strong the stage of the disease will be missed at which medical treatment is of any avail, and the purely temporary relief of tracheotomy will alone remain.

Breunig has never observed any injurious secondary or after effects, but only a salutary effect on diphtheritic or any other disease, when the emetics have been given frequently or for several days consecutively. Repeatedly has he rendered tracheotomy which had been considered unavoidable, unnecessary by copious and long-continued emetics, accompanied by occasional local cauterisation and painting with caustic and acids.

To be of any use this treatment must be adopted at an early stage of the disease. John Elliott.

Article 1037.

GARSON ON THE EFFECTS PRODUCED BY WEARING CORSETS.

In the *Illustrated Medical News*, October 1888, p. 78, *et seq.*, Dr. Garson describes, and gives a plate showing, some of the effects produced by wearing hard unyielding corsets. In the case of a healthy man the thorax is conical, narrow above, and gradually increasing in breadth until the eighth rib is reached, below which it again diminishes. It is also necessary to notice that in a normal skeleton the angle which the seventh, eighth, ninth, and tenth costal cartilages of either side make with one another at their junction to the sternum is a right angle. On examining the skeleton of a woman, aged 25, who had been known to tight

lace, the author found that the greatest breadth was obtained at the level of the fourth rib, after which the chest began to diminish. The ribs themselves, from the fourth downwards, were altered in shape, and the costal cartilages sloped obliquely upwards after the fourth was reached. The effect of constriction of the waist by stays alters the position of the subjacent viscera in a very marked degree. The lower ribs being bent inwards obviously fix the position of the liver and stomach, and force them against the diaphragm. The ribs being compressed from the fourth downwards, and the diaphragm strongly arched upwards by the abdominal viscera pressing against it, the capacity of the lower part of the chest occupied by the lungs and heart is reduced. The author has drawn up tables showing the average breathing capacity of men and women at different ages, and he finds that the average vital capacity of the lungs of women between 20 and 30 years is rather less than that of males between 60 and 70 years. The breathing capacity of men steadily decreases as age advances, but in women there is a decided drop between 25 to 35 years, but after that it tends somewhat to increase. The author also noticed that in men the whole of the chest-walls could be observed to rise and expand as the lungs were being filled during forced inspiration. The expansion movement was greatest in the region of the eighth and ninth ribs, at the junction of the cartilage and the rib, and gradually diminished towards the first rib; the abdominal walls were flattened in front, being stretched by the elevation of the chest and the increased curvature forward of the spine in the lumbar region. In women the upper part of the thorax expanded quite as freely as in men, till the upper border of the corsets was reached, below which little or no expansion movement could be observed. The part of the thorax which in men moved most freely, in females was fixed. The increase in the breathing capacity noticed in women about 40 years of age shows that when they cease to compress the waist with corsets the expansion of the chest-walls at once improves. Professor Roy has lately made some very interesting experiments, showing that constriction of the abdomen causes an increase in the amount of blood passing through the heart in a given time; he has also shown that the abdominal vessels alone are capable of containing more than all the blood in the organism, and he argues that moderate constriction of the abdomen by means of corsets is beneficial, but adds that the pressure upon the abdomen should be capable of alteration according to circumstances, and should be slight after meals to allow of full abdominal circulation during digestion. The knowledge that by means of abdominal compression the supply of blood to different organs can be regulated is very important, and will prove useful to physicians in the treatment of disease. Dr. Garson considers, however, that the constriction caused by stays as ordinarily worn by women is sufficient to keep the abdominal reservoirs empty; consequently there is more blood in certain organs than is necessary, whilst others are deficient in quantity. Amongst ladies of the middle and upper classes, disturbances and irregularities at the menstrual periods, attacks of so-called 'sick headaches,' flushes of the face, &c., may often be traced to congestion caused by the pressure of corsets. Again, constriction of the abdomen, by interfering with the proper function of the abdominal viscera, and preventing the amount of food required for the nourishment of the body being taken, is sufficient to account for many cases in which symptoms indicate deficiency in blood-formation.

[A series of interesting facts referred to in sect. 211 : 1 of the *Medical Digest* can be studied with advantage in connection with Dr. Garson's exhaustive and instructive paper.—*Rep.*]

RICHARD NEALE, M.D.

ARTICLE 1038.

PERNICE ON RACEMOSE MYOSARCOMA STRIO-CELLULARE UTERI.

IN Virchow's *Archiv*, vol. cxiii., Part 1 (July 1888), Dr. Pernice writes upon a remarkable class of semi-malignant uterine tumours, which are made up of embryonic striated muscular fibre. They form large racemose masses springing from the cervix. Theide speaks of a very malignant fibroma papillare cartilaginescens of the cervix. Rein has written of a myxoma enchondromatodes arborescens colli uteri, also malignant. Spiegelberg's two cases of papillary sarcoma of the cervix were similar to Rein's tumour. Winkel notes an adenomyxosarcoma cervicis, lobulated and rapidly recurrent, as was a polypoid tumour of the cervix described by Weber. A seventh case of racemose or lobulated tumour of the cervix twice recurrent is described by Dr. Pernice. A healthy nulliparous woman applied for relief at Greifswald in October 1886 (age not stated). Since the spring of that year a tumour had projected from the vagina at every period, at first receding, but recently it had grown larger and ceased to disappear up the vagina when the catamenial flow stopped. The uterus was enlarged, and the vagina filled with a great racemose mass of lobulated structures like purple berries; there was a passage amongst them into the cavity of the uterus. The tumour bled freely. On October 27 a wedge-shaped piece of the cervix, bearing the tumour, was excised; there was not much bleeding. In January 1887 it was found necessary to amputate the cervix by a loop of platinum-wire. As the uterus proved to be partially inverted by the tumour, it was cut through by the wire, with the tubes, whilst a small piece of the vaginal portion of the cervix, infected with malignant disease, was left behind. The prolapse of a piece of omentum turned the attention of the operator to the amount of normal structures taken away with the recurrent growth. The patient recovered for a time; but when she appeared a third time in Greifswald in September 1887 a large abdominal tumour filled the abdomen and pelvis. Cachexia was marked. An exploratory operation was performed on Sept. 26, but the tumour firmly adhered to the peritoneum and could not be removed. The patient lived till Oct. 27. The right ovary lay on the right side of the tumour, the left could not be found; at the lowest part of the tumour was the vagina, ending in a cicatrix; of course the uterus was absent. Part of the tumour-substance was reddish, like a muscular growth. Here it must be added that the recurrent growths had not the racemose character of the original tumour.

The microscopic appearances of the tumours are described at great length by Dr. Pernice. The lobules of the original racemose growth were invested with epithelium, in parts cylindrical, in other

places squamous. A thin, skin-like common epithelial covering lay over the lobules, where they were closely packed. Immediately under the epithelium of the lobules was a highly vascular layer, including transparent bodies (also found in the deeper tissues), which gave the amyloid reaction with solutions of iodide of potassium, though not, it appears, with methyl violet. The deep tissue of the lobules was very remarkable. It looked like œdematous connective tissue, myxomatous in parts, and particularly rich in cells around its vessels. The cells were spindle-shaped, stellate, or round. In the spindle-cells the nuclei were large, with strongly refractive nucleoli; they distended the protoplasm of the cell around them. An indistinct longitudinal fibrillation could be detected, and under a high power distinct transverse striæ were detected. Some of the spindle-cells were destitute of this remarkable transverse striation. Numerous groups of gland-tubes were found amongst the cells; they were lined with cubical epithelium. Both these tubes and the bundles of striated muscle-cells ran into the pedicle which united the lobule to the cervix uteri.

The tumour-substance removed during the second operation contained plain muscle-cells derived direct from the muscular wall of the uterus. Gland-tubes abounded, but not a trace of striated muscle-cells, spindle-cells with big nuclei, or corpora amylacea. Vessels were abundant. The tumour-substance found in the abdomen after death presented all the characters of a very vascular large-celled sarcoma; the cells undergoing fatty degeneration, and bearing large nuclei without the highly refractive nucleoli observed in the first tumour. Some of the nuclei were extremely elongated. All the appearances of the cells indicated rapid growth, they were mostly fusiform, though presenting great variety of outline.

Thus the original racemose tumour was partly made up of striated muscle-cells. The structure of these cells differed greatly from voluntary muscular tissue in adults, but strongly resembled the corresponding tissue in an embryo at the tenth week, where the muscle-cells were broad, and the transverse striæ more distinct than in the tumour; the nuclei bore strongly refractive nucleoli in both cases. In a fifth-week embryo the resemblance of the muscle-cells to the cells in the tumour was yet more striking. Polarisation tests corresponded in the fœtal and in the tumour-cells. Dr. Pernice detected glycogen in the racemose tumour, as did Marchand in the case of a sacral tumour which bore similar young muscle-cells. O. Weber has described uterine polypi which contained striated muscle-cells; he believed that the plain muscle-cells of the uterus had become converted directly into striated cells. Pernice and Rindfleisch agreed with Weber's opinion. Other pathologists maintain the heterologous nature of rhabdomyoma, which arises, they think, from embryonic muscular tissue diffused amongst other structures. They explain in this manner rhabdomyoma of the kidney, testis, and parotid gland. The history of the development of the uterus does not give any support to this theory. Cattani and Vincenzi have certainly detected rhabdomyomatous growths in the wall of the bladder, which may prove Weber's theory of the conversion of plain into striated muscle-cells. Neumann has, very reasonably, referred the origin of an apparently heterologous myoma of the testis to the gubernaculum, so that the tumour was in reality a metaplastic development.

ALBAN DORAN.

ARTICLE 1039.

RAMADIER ON SPECIAL DISORDER OF CUTANEOUS SENSIBILITY AND SENSATION OF MOISTURE OBSERVED IN TWO CASES OF INSANITY.*

THE first case, that of a female aged 43, was admitted under Dr. Ramadier's care into the Asylum of Lafond in December 1887. The family history of her parents was wanting, but, of the patient's sisters (two in number), one becomes insane at her confinements; the other, almost of sound mind, has given birth to two children, both of whom died of meningitis. Little was known of her disease before her admission. She had led a very eventful and irregular life, and during a stay of four years in Africa had committed many excesses. Her menstrual periods had never been regular, and for five years she had different attacks of metrorrhagia, which had much weakened her. For six or seven months she had shown signs of unusual sexual excitement, with disordered intellect, melancholy, and thoughts of suicide, succeeded by ideas of riches and grandeur. On her admission a diagnosis of general paralysis was made, from the embarrassed speech, inequality of the pupils, and other symptoms. Accompanying these was the special disorder of a sensation of moisture on the skin. The patient imagined she felt her clothes and everything she touched to be moist. When her eyes were covered, and she was touched with dry and then with wet linen cloths, she was unable to distinguish the difference, and said all had the same feeling of moisture. She could readily distinguish a warm from a cold body, and tell the shape of an object. She was sensible to pain or tickling, and showed no zone of anæsthesia or hyperæsthesia. Her other senses were unimpaired, except that of smell, which was much diminished. She died on Jan. 28, 1888. On examination the usual lesions of general paralysis were found, opacity of the arachnoid, and adhesions of the pia mater, especially to the grey matter of the frontal and parietal gyri. The olfactory nerves were softer and less white than normal. The disorder of sensibility persisted to the end of her life, and as long as she could express herself intelligibly she complained of being wet. When she rose she hung her garments at the stove; while in bed she kept twisting the coverings to expel the water. The second case, also a female, aged 62, entered the Asylum on Oct. 2, 1874. Information as to heredity and antecedents was wanting. On her admission the medical certificates stated that she suffered from epileptic insanity, with periods of excitement coinciding with the attacks. She had ideas of persecution. The epileptic attacks, frequent enough at first, became less so, and disappeared without treatment after two years, as well as the periods of excitement, which accompanied them. At the time of her admission the patient believed that she was persecuted by a commissary of police. She continued to have for some time ideas of being poisoned, drank only water, and picked her food. Now she eats and drinks like other people. She showed during her epileptic crisis a similar disorder of sensibility to that of the first case. There was the same sensation of moisture provoked by the touch of any object, except that of woollen material. Through the day the patient covered her body with

* *Annales Médico-Psychologiques*, July 1888.

a woollen blanket, and at night she slept inside her mattress, which she had opened. Sensibility to touch, pain, tickling, and temperature are still normal. Bearing in mind the coincidence of the suppression of the morbid sensation, and the recovery of the epilepsy, Dr. Ramadier asks if both might not be referred to the same lesion. He observes that three modes of cutaneous sensibility are already admitted, that of contact, pain, and temperature, to which Brown-Séquard has added that of itching. Dr. Ramadier is willing to add a fourth, which enables us to appreciate the different degrees of moisture in objects in contact with the skin. W. W. IRELAND, M.D.

ARTICLE 1040.

THIEM ON THE DIAGNOSTIC IMPORTANCE OF ASCERTAINING THE QUANTITY OF HYDROCHLORIC ACID IN THE CONTENTS OF THE STOMACH IN CASES OF CARCINOMA VENTRICULI.

ASSUMING as an undoubted fact the typical failure of hydrochloric acid in carcinoma ventriculi, Dr. C. Thiem (Cottbus) first enumerates the explanations of this fact given by various experts (*Deutsche med. Zeitung*, No. 68, 1888).

Von den Velden believes that the cancer-juice neutralises the hydrochloric acid, for he found that the hydrochloric acid reaction ceased in a quantity of gastric juice when mixed with an equal quantity of filtered cancer-juice taken from the body of one who had died of cancer of the œsophagus. The gastric juice also lost at once its peptonising power. Hence Riegel concludes that in the stomach of a cancer patient there exists something that destroys free hydrochloric acid. That this something arises directly from the neoplasm seems to be proved by an experiment, in which juice taken from cancer-tubercles had the like effect on gastric juice taken from a healthy stomach. Ewald, Kietz, and Manassein assume that the anæmia, ever present in carcinoma and gastric catarrh, are the causes of the failure of free hydrochloric acid, for a catarrhally affected and anæmic mucous membrane will naturally secrete less gastric juice. Koester rejects Riegel's theory of a specific substance produced by carcinoma and destroying the hydrochloric acid otherwise than by neutralisation, for the reason that, on the one hand, a carcinoma reduces the secretion of the acid, and, on the other hand, in ulcerating carcinomata, the acid is neutralised by the albuminates of the secreted cancer-juice. Klemperer shows that frequently there are organic bases in the stomach-contents which may neutralise the acid—*e.g.*, glycocol, betain, leucin, the ptomaïnes of the lactic acid bacilli, peptotocin, &c.—and that the failure of methyl-violet reaction proves only an absence of *free* hydrochloric acid. Thiem holds, with Koester, that in cases of advanced carcinoma ventriculi the failure or the decrease of hydrochloric acid is to be attributed to the fact that a large portion of the gastric mucous membrane and therewith of the juice-producing glands has become cancerously degenerated, and that the functions have naturally been destroyed or altered. But now the failure of the hydrochloric acid has been proved by the experiments of Edinger, Grundzach, Ewald, Wolff, Klemperer, and others, not to be confined to carcinoma ventriculi, but to occur in other gastric diseases. Even Riegel has observed such cases, so that he is compelled to put his theory rather negatively, as follows:—'The constant presence of free hydrochloric acid and the normal peptic power of the gastric juice exclude with certainty the possibility of a carcinoma, let the other symptoms in favour of such a diagnosis be what they will.' But, even in this Riegel has met with opposition from Ewald, who asserts that in diagnosis the failure of hydrochloric acid is a very material factor, but by no means definitively decisive. Further, Cahn and von Mering point out that in carcinoma of the pylorus there is not only not a failure of the acid, but that, as a rule, it is present even in considerable quantities. This latter assertion is, however, qualified by Honigmann and von Noorden, who state that what is found in such cases is not *free* hydrochloric acid, for it lacks the peptic power.

Kirstein reports that in one case, although the methyl-violet reaction repeatedly occurred, the diagnosis of advanced carcinoma ventriculi was made on account of the other symptoms, and that the *post-mortem* proved this diagnosis to be correct.

Thiem himself considers it to be the general rule that the methyl reaction fails in carcinoma ventriculi, but he dare not pronounce it to be an absolute law. As exceptions he gives three cases that came under his own observation, in which Riegel's reactions constantly occurred, showing the presence of free hydrochloric acid in sufficient quantities, and yet there was advanced carcinoma ventriculi. A woman, aged 41 years, had suffered for half a year from daily vomitings of masses resembling coffee-grounds. She was reduced to a skeleton, so that the examination of the abdominal organs was rendered very easy. Two fingers-breadth below the navel there could be seen and felt a tumour of the size of a man's fist, which, spreading to the right, ended in the form of a sausage. In addition there were, under the epigastric integuments, three movable knots, from the size of a hazel-nut to that of a walnut, which were pronounced to be swollen lymphatic glands of the mesentery. That there was a connection between the large tumour and the stomach was evident. The enormous dilatation of the stomach and the disproportion of scanty urine to the large quantity of fluid swallowed, proved that there was stenosis of the pylorus. By Teichmann's test numerous preparations of well-formed hæmin crystals were gained from the vomited matter. Yet five times within nine days Riegel's reactions on free hydrochloric acid occurred promptly. The patient prevailed on Thiem, much against his will, to make the attempt to help her by an operation. Considering the extensive adhesions of the pylorus, he determined to do gastro-enterotomy. This proved to have been necessary, for the pylorus, as well as the cancerously affected duodenum, were found to be firmly adhering to the head of the pancreas, the liver, the mesentery—in fact, to the whole of their surroundings. The operation was technically successful, but the patient sank and died fifty hours after the operation, but without the slightest peritonitic symptoms. After the operation the vomiting had ceased. The *post mortem* showed that the enormous ulcerated carcinoma blocked the pylorus to such an extent that a fine probe could barely be introduced. The microscope showed a cylinder-celled cancer proceeding from the glands, with intense hypertrophy of the gastric walls.

The two other cases were cardiac cancers, in which gastrotomy was done. Through the gastric fistula Thiem could plainly feel the tuberculous cancer masses, which in one patient often bled, and certainly filled a third part of the gastric cavity. The gastric juice in both cases showed distinctly the hydrochloric acid reaction. The stomach digested heavy food excellently.

Thiem then describes Riegel's examination by methyl-violet reaction. First, a few drops of the stomach-contents are dropped on Congo-paper. The more the lilac or blue colour appears, the greater is the quantity of hydrochloric acid. Lactic acid produces a similar colouring, but it is more of a bluish black; yet this occurs with lactic acid only in a degree of concentration that is out of the question in the stomach. After the stomach-contents have been filtered, they may be tested with litmus paper for acids generally. Then a few drops of the filtered contents are added to a well-diluted water solution of methyl-violet. The presence of hydrochloric acid is betrayed by a distinct sky-blue colouring. Thiem also gives three elegant reactions recorded by Uffelmann.

1. To 50 cubic centimètres of distilled water from two to five drops of liq. ferri perchlor. are added (it must always be made fresh). This very slightly yellowish solution is not affected by the addition of diluted hydrochloric acid, acetic acid, or butyric acid; but in the presence of free lactic acid or lactic acid salts it becomes more or less strongly coloured with yellow.

2. Add to a 2 to 4 per cent. carbolic solution some drops of liq. ferri perchlor. until it becomes of a steel-blue colour. If filtered gastric juice be added to this mixture, the latter will simply lose its colour if there be only hydrochloric acid, and it will become distinctly yellow if there be also or only lactic acid.

3. With amyl alcohol make an extract of freshly pressed bilberry-juice. This is of a reddish-blue colour, which becomes lilac when mixed with hydrochloric acid, while the lower watery stratum is of a bright red currant colour.

Lastly, Thiem considers Günzburg's test very safe—viz., Add some drops of the filtered stomach contents to the same number of drops of phloroglucin (2·0) and vanillin (1·0) dissolved in rectified spirits (30·0). This, on being carefully evaporated in a porcelain dish, forms a beautiful film of red crystals, which does not occur with organic acids.

JOHN ELLIOTT.

ARTICLE 1041.

HAMILTON ON THE CORTEX OF THE BRAIN.*

THE methods of study adopted were chiefly the gelatine-potash process for naked eye observation and a modification of Weigert's hæmatoxylene copper stain.

Callosal Fibres.—This section is mainly devoted to a consideration of Dr. Beevor's views with regard to what Hamilton calls the 'crossed callosal tract.' This tract, he says, is chiefly composed of callosal fibres which have arisen from the cortex, which have crossed in the corpus callosum, and which, instead of turning upwards to become attached to points in the opposite cortex corresponding with those from which they sprang, are now turning downwards into the two capsules to become subsequently united to the basal or other ganglia. This theory is denied and the old commissural view maintained by Dr. Beevor.

Cortical Plexuses—These plexuses of medullated fibres exist in the cortex of the cerebellum (probably most densely), and also in all parts of the cortex of the cerebrum. They also, according to Hamilton, intertwine themselves round the nerve-fibres through a great part of the white substance. That of the cortex is an extension or outcrop of that in the white matter. A similar medullated plexus also exists in certain of the ganglia, such as the thalamus and lenticular nucleus. In the former it is in a high state of development. It reaches a higher state of development in a little comma-shaped body which lies in the angle constituted by the under aspect of the tectorial part of the corpus callosum and the upper surface of the caudate nucleus. This body is a mass of dense and complicated nerve-plexus, without nerve-cells. It is contiguous to the caudate nucleus below, but the tissue of the one is separated from that of the other by a sharp line of demarcation. It passes for a short way underneath the corpus callosum, and at its lower extremity, posteriorly, seems to be united with the tænia semicircularis. Its fibres are directly continuous with the fibres of the plexus in the white matter first referred to. It is most developed anteriorly in the region of the head of the caudate nucleus.

Callosal Fibres.—Most of the callosal fibres from the vertex appear to run directly into the corpus callosum. Those, however, derived from the lower third or half of the cortex between the sylvian fossa and the great longitudinal fissure pass, first of all, into the plexiform nucleus. After passing into the inner and outer capsules, these arched callosal fibres become united into dense bundles. A very large proportion of them lose themselves in the thalamus opticus. Few, if any, enter the caudate nucleus. The lenticular nucleus may receive through the striæ medullares a considerable number, and probably some of the fibres connected with the red nucleus may also be callosal. A large number appear to end in the pons and medulla oblongata, while there is a probability of certain even extending down to the spinal cord.

Direct fibres.—These lie to the outside of the crossed callosal tract, those derived from the marginal gyrus, in the sheep, being very close to the latter. In man, the author calculates that about one-third of the fibres entering the anterior two-thirds of the posterior limb of the inner capsule are direct, while the remainder are crossed callosal. The direct fibres being derived from a very wide area, how is it that they are so few in number when they decussate in the medulla? The author believes that the direct continuity of the process of a ganglion motor cell in the cortex with the pyramidal tracts of the spinal cord is a myth. 'I am strongly inclined,' he writes, 'to believe that, just as in the case of many of the callosal fibres, the motor fibres break up into a plexus, from which again fresh fibres, those which enter the pyramidal tracts, take their origin.' Such a plexus would be a means of reduction and association, a means by which the action of the many fibres coming from a particular cortical area may be combined and correlated in the few. Professor Hamilton points out that the white matter

* On the Conducting Paths between the Cortex of the Brain and the Lower Centres, &c. *Proceedings of the Royal Society, Edinburgh*, vol. xiv., p. 519.

is relatively more abundant in man than in any other mammal, and that the lower we go in the scale, the greater is the disproportion. The cause of this, he believes, resides mainly in the fact that the intertwining plexus which ramifies through the whole centrum ovale is vastly more abundant in man than in the lower animals, and that hence, probably, the superiority of the human brain as an instrument of association may be accounted for.

Thalamus opticus.—The author thinks that there is reason for supposing that this ganglion is largely concerned with the education of the brain through the optic nerves and corpus callosum. The fibres of the last entering the thalamus are, he thinks, the means by which the opposite side of the brain is educated through vision. In this connection he points out that where the corpus callosum has been destroyed in infancy, imbecility seems to have been the invariable result. If destroyed in adult life, no symptoms may follow, since the higher centres would have been educated. In this connection, he writes, 'I do not see why in the internal economy of the brain there may not be paths for *educating* the higher centres through vision, hearing, touch, and so on, and a whole set of other paths by which the results of this education may be brought into action. If such be the case—and I advance this with all due caution—the callosal system of fibres might be regarded as the great *educating system*; while the direct bundles to which I have adverted would constitute the means of adapting this education to a utilitarian purpose.'

BERTRAM C. A. WINDLE, M.A., M.D.

ARTICLE 1042.

TCHÜDNOVSKY ON A CASE OF HYDROMENINGOCELE TREATED BY EXCISION.*

DR. JAKOV B. TCHÜDNOVSKY, of Viatka, describes (*Vratch*; and *Sprimon's Meditz.*, 1888, vol. iii., p. 1089) the following remarkable and very instructive case referring to a generally well-developed and nourished peasant girl, aged 3, who was admitted to the Zemsky Hospital on account of a large frontal tumour of congenital origin. At birth the swelling had had the size of a cherry, but it had been steadily, though slowly, increasing ever since, the growth having been at first painless, but of late associated with excruciating pain. On examination, the tumour was found to be as large as a big orange, measuring 21 centimètres transversally, and 14 longitudinally. It had a broad pedicle measuring 9 centimètres in the circumference, and protruding from the glabella, the tumour hanging down along the whole nose, and covering the internal angles of the palpebral slits. The nose was strongly flattened, the nostrils closed, the child breathing with open mouth. The swelling proved to be elastic and fluctuating, translucent against the light, tense and very tender, the skin over it being thinned and smooth, except a median stripe, which was studded with minute scars. When the girl cried or shouted, the protrusion became distinctly larger, redder, more tense, but it did not decrease on compression, and generally proved to be absolutely irreducible. There was nothing abnormal about the skull, mental functions, articulation, gait, or movements of the child. A hydromeningocele was diagnosed, and a palliative treatment by tappings resorted to. A small-sized trocar having been plunged into the hernia, about three ounces of a perfectly colourless, limpid, slightly alkaline fluid escaped. Its specific gravity was 1,007, and it contained scanty amounts of chlorides and proteids, with traces of sugar. Only a trifling diminution of the tumour was noticed. In several hours it attained its former size and tenseness, while an incessant and very profuse flow of the cerebro-spinal fluid from the puncture ensued, in spite of the latter being closed with adhesive plaster. In view of the position of things, a radical operation was resolved upon and performed, without delay, by Drs. Tchüdnovsky and V. G. Svislovsky. A vertical incision through the skin, cellular tissue, and fascia having been made, a bilocular hernial sac, containing nothing but the cerebro-spinal fluid, presented itself. It proved to consist of the dura mater protruding through a smooth-edged defect in the frontal bone. The hole was tightly filled up ('as if plugged') with a portion of the cerebral hemisphere, covered with the pia. The hernial sac was excised, the wound closed with sutures, and an antiseptic pressing bandage applied. The operation was followed by several convulsive fits, with coma, ending in death twenty-five hours later. The necropsy showed that the child had died from fulminant meningitis. The dura was firmly adherent with the cranial fornix, and the pia at some spots, but the brain was developed quite normally, its ventricles not dilated, and any signs of hydrocephalus absent. The hernial cavity measured 7½ centimètres in circumference, and occupied the site of the nasal and glabellar processes of the frontal bone, the nasal and ethmoidal bones being slightly displaced downwards and flattened.

Analysing his case, Dr. Tchüdnovsky points out—1. That hernial tumours of the head belong to extremely rare lesions. 2. That meningocele (or Virchow's hydromeningocele) is met with far more rarely than encephalocele. 3. That, as a rule, congenital meningocele is accompanied clinically with such symptoms as strabismus, convulsions, muscular contractions, disturbances of speech, &c., and anatomically with macrocephalia, microcephalia, porencephalia, cranial scoliosis, hydrocephalus (total or partial), and so on. Meanwhile, his patient did not present any symptoms or lesions of the kind. 4. That his case speaks powerfully in favour of Cruveillhier's etiological theory according to which the primary cause of meningo-cerebral protrusions is given in inflammatory adhesions of fœtal membranes with integuments of the head, the adhesions leading to a consecutive local arrest of the ossification process on one side, and producing a steady traction on the cranial contents on the other; the latter, therefore, are simply dragged out through an osseous defect. As regards Dr. Tchüdnovsky's case, the main facts pointing in that direction are thought to be these—(*a*) a complete absence of hydrocephalus or any signs of an increased intracranial pressure; (*b*) cicatricial traces on the skin covering the hernia; (*c*) distinct traces of an old lepto-pachymeningitis; (*d*) an hermetical occlusion of the hernial hole with the brain. 5. The latter fact is supposed to show that hydromeningocele has developed from meningo-encephalocele; that is, at first, under the influence of traction produced by inflammatory adhesions on the cerebral contents, there were protruding both the brain with its pia and the dura; later on, when the

* Hydromeningocele cerebrale congenitum s. hernia meningea nasofrontalis. (*Sprimon's Meditzina*, 1888, vol. iii., p. 1059.)

adherent fœtal membranes had happened to be torn away from the hernia, some portion of the hernial fluid escaped through the rupture, while the protruding part of the brain sank down into the cranial cavity to tightly plug the hole; and thus only meningocele remained. [Granted that an inflammatory process has been playing so important a part in the causation of the child's hernia, how is it then that no *local* adhesive meningitis was found at the *post mortem*? The author says that some old meningitic traces were detected somewhere afar from the hernial cavity, while neither were any special adhesions present between the sac and the frontal integuments, nor between the sac and the osseous defect. Especially, how does he explain that there were no inflammatory adhesions between the sac and the pia covering the subjacent cerebral 'plug'?—*Rep.*] 6. There have been proposed three methods of a radical treatment of meningocele—(*a*) injection of iodine; (*b*) ligature; (*c*) incision, with excision of the sac. According to Heinecke, the latter plan has never been practised before. The first case treated after the method seemingly shows that the latter is as bad as possible. At all events, Dr. Tchüdnovsky emphatically insists on discarding the operation from the list of radical methods, at least as far as infantile cases are concerned. V. IDELSON, M.D.

ARTICLE 1043.

POULET ON THE GASTRIC AND INTESTINAL JUICES.*

THE acids of the gastric and intestinal juices, as well as their salts, are crystallisable, dialysis offering a convenient and sure method of obtaining them. The gastric juice of adult omnivores, and notably of a healthy man, contains only hippuric acid in the first period of digestion, but towards the end a mixture of this acid and of tartaric acid is present. The latter is only to be discovered in the secretion of the gastric mucous membrane when the stomach is empty. Before weaning, scarcely anything but tartaric acid is found in the gastric juice, as experiments on young animals, notably the kid and the calf, prove. The same is the case in adult carnivores, and especially in a dog with a gastric fistula. For this reason the choice which has generally been made up to the present of this animal as the one in which to study the action of the gastric juice, is unsatisfactory, the pig, whose dentition and alimentary canal are more similar to those of man, being preferable. It is easy to establish a gastric fistula in the pig, but difficult to collect the gastric juice on account of the obstinacy of the animal. The author therefore recommends that the animal should be killed when in full digestion, and its stomach thrown upon a dialyser. It is irrational, he thinks, to admit that hippuric acid may be secreted after death, if it is not so during life. The absence of this acid in the products obtained by dialysis from the mucous membrane of the empty stomach of the pig proves that this secretion is the result of prolonged vital phenomena. The author has found in the gastric juice of a dyspeptic patient, a quarter of an hour after a meal, both tartaric and hippuric acids. He conjectures that in grave diseases of the stomach there may be total absence of hippuric acid, tartaric being alone present. In all the cases which he has examined, including man, healthy and unhealthy, and animals, there was never any trace either of lactic or sarcolactic acid.

Each of the two gastric acids requires a special procedure for its extraction. For the obtaining of large quantities, if hippuric acid is required, sulphuric acid alone must be used; if tartaric acid, hydrosulphuric. The hippuric acid of the gastric juice possesses all the properties of the same substance extracted from the urine of herbivores; the same crystallisation, the same appearance, the same reduction into benzine by dry distillation over caustic potash mixed or not with quick lime.

On the other hand, the tartaric acid differs from the vegetable acid in several of its properties, notably by being attacked and decomposed, in the cold, by concentrated sulphuric acid.

The reactions of the dialysed gastric juices on colouring matters are very different from those of hydrochloric acid. On the contrary, they resemble those which are given by hippuric acid obtained from the urine of herbivores or those of tartaric acid. The yellow colour of Uffelmann's reaction, which has been attributed exclusively to lactic acid, is not characteristic, but may also be due to tartaric or hippuric acids.

When a dilute hydrochloric acid is submitted to the action of heat with Gunzburg's reagent, a red colour appears at a temperature of 75°-78° C. A similar colour is produced if hippuric acid is used, but only towards 105°-108°. It is therefore incorrect to say that inorganic acids alone produce the phenomenon in question, and that Gunzburg's solution is a test for hydrochloric acid.

If the gastric juice be employed, the red colour does not appear at 75° C., as is the case with hydrochloric acid, but at about 105° C., which is exactly the point at which hippuric acid affects Gunzburg's reagent.

The intestinal juice is acid throughout the whole of the small intestine, during the period of the intestinal digestion. The cause of this acidity is the same tartaric acid which is secreted in the stomach in the empty condition, amongst young animals during lactation and amongst adult carnivores even during digestion.

BERTRAM C. A. WINDLE, M.A., M.D.

* Nouvelles Recherches Expérimentales sur les Principes Acides du Suc Gastrique et sur celui du Suc Intestinal. (*Arch. de Phys. Norm. et Path.*, 1888, No. 7, p. 201.)

ANATOMY.

RECENT PAPERS.

1044. WARYNSKI.—On Simple and Complicated Harelip (*Contribution à l'étude du bec de lièvre simple et complexe*). (Virchow's *Archiv*, Band cxii., Heft 3, S. 507.)

1045. LABORDE.—On the Cardiac Nucleus of the Pneumogastric (*Du noyau d'origine dans le bulbe rachidien, des fibres motrices ou cardiaques du nerf pneumogastrique ou noyau cardiaque*). (*Arch. de Phys. Norm. et Path.*, 1888, No. 4, p. 397.)

1046. STRAHL AND MARTIN.—On the Development of the Parietal Eye (*Die Entwickelung des Parietalauges bei Anguis Fragilis und Lacerta vivipara*). (*Arch. für Anat. u. Entwick.*, 1888, Heft. 2-4, S. 146.)

1047. TAKAHASI.—On the Position of the Fœtal and Infantile Bladder (*Beiträge zur Kenntniss der Lage der fœtalen und kindlichen Harnblase*). (*Arch. für Anat. u. Ent.*, Heft 1, S. 35.)

1048. SUTTON.—On the Nature of Ligaments. (*Jour. of Anat. and Phys.*, vol. xxii., pt. iv., p. 542.)

1049. LITTLE.—On the Cortex of the Kidney. (*Proc. Anat. Soc. Great Britain and Ireland; Jour. of Anat. and Phys.*, vol. xxii., pt. iv., p. 26.)

1050. BROOKS.—The Distribution of the Cutaneous Nerves on the Dorsum of the Human Hand. (*Internat. Monatssch., f. Anat. u. Phys.*, Band v., Heft 8.)

1051. BARDELEBEN.—The Position of the Female Pelvic Organs (*Ueber die Lage der weiblichen Beckenorgane*). (*Anat. Anzeig.*, Jahrg. iii., Nos. 19–21, p. 535.)

1052. KÖLLIKER.—On the Intermaxillary Bones (*Ueber die einfache Anlage des Zwischenkiefers*). (*Anat. Anzeig.*, Jahrg. iii., Nos. 19–21, p. 272.)

1053. FOOT.—On the Sigmoid Valves. Pulmonary Artery with Two Valves. (*Dublin Jour. of Med. Science*, cc., Series iii., p. 100.)

1054. CUNNINGHAM.—On the Topographical Anatomy of the Brain. Demonstration of fifteen models illustrative of Brain Growth and Cranio-Cerebral Topography. (*Dublin Jour. of Med. Science*, cc., Series iii., p. 151.)

1055. CUNNINGHAM.—On the Sacro-Iliac Joints in a Pregnant Woman. (*Dublin Jour. of Med. Science*, cc., Series iii., p. 155.)

1056. BIRMINGHAM.—On the Homology and Innervation of the Achselbogen, &c. (*Dublin Jour. of Med. Science*, cc., Series iii., p. 156.)

1057. HAMILTON, PROFESSOR D. J.—The Measurements of the Normal Heart. (*Jour. of Anat. and Phys.*, vol. xxiii., part i., p. 40.)

1058. SYMINGTON.—The Bulbo-Cavernosi Muscles in Women. (*Proc. Anat. Soc. of Great Britain and Ireland; Jour. of Anat. and Phys.*, vol. xxiii., part i., p. 2).

1059. SYMINGTON, J. M. D.—On the Rectum and Anus. (*Journal of Anat. and Phys.*, vol. xxiii., part i., p. 106.)

1060. PYE, WALTER, F.R.C.S.—On the Growth of the Bones of the Lower Extremities. On the Growth-rate of the Bones of the Lower Extremities, with Especial Reference to Ricketty Curvatures. (*Jour. of Anat. and Phys.*, vol. xxiii., part i., p. 116.)

1061. WENZEL GRUBER, DR.—On Anatomical Abnormalities (*Anatomische Notizen*). (Virchow's *Archiv*, Band cxiii., Heft 3, p. 530.)

1062. TROLARD, DR.—On the Anatomy of the Spinal Membranes, &c. (*Recherches sur l'Anatomie des Méninges spinales, des nerfs sacrés et du filum terminale dans le canal sacré*). (*Arch. de Phys. Norm. et Path.*, 1888, No. 6, p. 191.)

ART. 1044. *Warynski on Simple and Complicated Hare-lip.*—1. Certain peculiarities of congenital fissure of the palate teach us that the nasal apophysis of the intermaxilla develops from the external nasal process, and the body from the internal. 2. The ossification of the intermaxillary bone takes place by two distinct centres: (*a*) one which appears at the posterior and external limit of the internal frontal process, and which contributes to the ossification of the nasal apophysis of the intermaxilla, its external surface, the anterior walls of the alveoli of the incisors, and the posterior wall of the socket of the lateral incisor; (*b*) a second centre which takes part in the formation of the incisive canal and the posterior wall of the socket of the central incisor. 3. In certain exceptional cases the external nasal process may ossify independently from the internal, and in such a case a suture is present, separating the nasal apophysis from the body of the intermaxilla. 4. The endo-mesognathic suture of Albrecht exists constantly during a certain period of the evolution of the intermaxilla. 5. This suture is the result of the contact of the two centres mentioned. 6. The incisive suture in man divides the alveolus of the lateral incisor into two unequal parts, a part being formed by the superior maxilla, the incisors thus not being limited to the intermaxilla. 7. Congenital fissure on the palatine aspect is always disposed in the direction of the incisive suture, and divides the alveolus as well as the follicle of the incisor tooth. 8. The same fissure on the external surface of the maxilla separates most frequently the body of the intermaxilla from its nasal apophysis, which remains attached to the superior maxilla. 9. In the case of fissures separating the nasal apophysis of the intermaxilla the ossification of the process takes place by a supplementary centre, the body preserving its two primitive points. 10. The suture of Albrecht may coincide with the congenital fissure of the palate, and is then internal to it. 11. In the temporary dentition the alveolar fissure passes always between the two lateral incisors, of which one is supernumerary; in the permanent the position of the teeth is variable. 12. In alveolar fissure the incisor tooth situated on the maxillary side belongs to the maxilla and not to the intermaxilla. 13. In dogs, amongst which the incisor fissure divides the canine socket into two parts, the congenital fissure passes between two canines, of which the supernumerary is placed on the side of the intermaxilla. 14. The supernumerary lateral incisor in the temporary dentition is found invariably in all cases of simple, uncomplicated hare-lip.

1045. *Laborde on the Cardiac Nucleus of the Pneumogastric.* — The paper demonstrates the existence in the medulla of a nucleus of origin or cardiac nucleus of the motor, centrifugal, moderating fibres of the vagus, or rather of the spinal nerve which furnishes them. The precise site of this nucleus is external, and superior to the columns of grey substance at the level of the restiform fibres and nucleus, not far from the sensory nucleus (bulbar or descending nucleus) of the trigeminal; exactly at the level of the group of cells which the recent histological researches of Stilling, Kölliker, L. Clarke, Van Deen, Huguemin, and Mathias Duval have made known as the accessory nuclei of the hypoglossal and of the mixed nerves (pneumogastric, spinal, glossopharyngeal). This new demonstration confirms and explains the independence and functional dissociation of the mechanical, respiratory, and cardiac phenomena which act under bulbar influence by the intermediation of the conducting fibres of the pneumogastric and spinal nerves.

1046. *Strahl and Martin on the Development of the Parietal Eye.*—1. In lacerta vivipara and anguis fragilis, the parietal eye, formed by the division of the epiphysial rudiment, consists originally of a hollow vesicle of cells, which are similar to those of the central nervous tube at a corresponding time. Through differentiation the anterior part of the vesicle becomes the lens, the posterior the retina. 2. Two layers form in the retina, through the development of a layer in the inner part of the vesicle, similar to the white substance of the central nervous system. The inner is practically without nuclei, if considered apart from mitosis, which is exclusively found in it. Sometimes a similar thin layer is found also in the lens. 3. Farther back a nerve-cord appears, which runs in a connective-tissue pedicle, distinctly visible before the appearance of the nerve, and connects the parietal eye with the roof of the central nerve-tube, in front of the root of the epiphysis. The nerve-fibres lie at first outside the eye, so that,

in a certain sense, there are three layers of the retina. 4. At a later time the nerve lies in the interior of the retina, outside it being a layer of cells, for the most part single. The retina then consists of four layers : (*a*) an inner, anuclear, possessing mitosis ; (*b*) a thicker without mitosis, inner nuclear layer (these two are parts of one cell-layer) ; (*c*) the extension of the nerve-fibres ; (*d*) an outermost single layer of cells (outer nuclear layer). 5. The pigment which originally lies in the inner nuclear sheet, especially near the lens, locates itself later chiefly in the inner nuclear sheet. 6. The outer nuclear sheet gives in older embryos of anguis, a specific colour reaction, as compared with the inner. 7. On the outer surface of the parietal eye forms at times a cornea, which in certain stages of development is quite similar in structure to that of the real eye. 8. The nerve of the parietal eye is in middle stages of development stronger than in the later, both in anguis and lacerta. 9. The zone 4*a* contains no quiescent nuclei, but only in process of division ; if the latter are absent in the preparation it is anuclear. The conclusion is therefore correct that the nuclei in division move towards the free surface, and, after complete division, go again to the deep parts.

1047. *Takahasi on the Position of the Fœtal and Infantile Bladder.*—The author's observations teach him that the urinary bladder from fœtal life to a certain period of childhood possesses normally a higher position than in the adult. A gradual descent from the time of fœtal life, however, does not occur, since it stands relatively higher in the new-born child than in the younger fœtus. How does the descent occur? Lange and Henke consider that the small pelvic room accounts for the high position of the bladder. Cunningham believes, from the study of anthropoid apes, that the alteration in position is due to the erect posture in man. The author's observations on three full-grown apes show that the bladder lies higher than in new-born children and infants. If it be true that the expansion of the pelvis, due to the upright posture, leads to a descent of the bladder, the amount of its connection with the surrounding structures should be considered. As a matter of fact, the bladder is not markedly fixed in any way, the connection with the abdominal wall being very loose. The lateral ligaments and the urachus are of small importance in the attachment of the bladder, being quite loose when that viscus is empty. The chief connection of the bladder then is to be sought in the fascia of the pelvis. Putting all these things together, it appears that the descent of the bladder occurs from two causes : (1) through the intrinsic weight of the bladder which produces a sinking in the upright posture, and (2) through the enlargement of the pelvic cavity.

1048. *Sutton on the Nature of Ligaments.*—I. *Extensors of the Hand.*—1. The extensores secundus, indicis, and minimus are the remnants of a second long extensor, which originally arose from the external condyle of the humerus, and corresponding surface of the olecranon. 2. The extensor minimus maintains its old attachments, the remaining slips having migrated down the ulna. 3. The extensor medius and annularis slips have regressed into fibrous tissue, but not infrequently they reappear as functional muscles. 4. As these muscles migrated from the neighbourhood of the elbow, they carried with them the branch of the musculo-spiral nerve which supplied them. This subsequently became the posterior interosseous nerve. Its apparently meaningless termination on the back of the carpus is probably due to its being involved in the regression of the medius and annularis muscles. 5. The extensor primi internodii pollicis must be regarded as a segment of the long extensor, which has been supplanted by the extensor secundus. II. *Gimbernat's Ligament.*—The author considers Gimbernat's ligament and the triangular fascia to be remnants of the very stout ligament which in marsupials anchors the epipubic bone firmly to the ileo-pectineal line. III. *Ilio-femoral Ligament.*—He suggests that the outer limb of the ilio-femoral band is the fibrous representative of the gluteus quartus (sensorius) muscle. The points upon which this theory is founded are as follow. 1. The ilio-femoral ligament corresponds in its attachments to the gluteus quartus muscle. 2. The relation of the ligament to the reflected tendon of the rectus femoris muscle is precisely that exhibited by the gluteus quartus muscle in most mammals. 3. In at least one monkey (*cercocebus collaris*) the ilio-femoral band is present, but no gluteus quartus. 4. In other monkeys, possessing a functional gluteus quartus, the ilio-femoral band is unrepresented.

1049. *Little on the Cortex of the Kidney.*—The author, as the result of a number of observations on the depth of the cortex of the kidney, states that it is never below two, or so great as six, lines. The average is as nearly as possible four lines, or one-third of an inch.

1050. *Brooks on the Cutaneous Nerves of the Hand.*—Dr. Brooks's careful dissections have led him to conclude that certain areas of the skin on the back of the hand may be supplied by no less than three nerves ; viz., part of the ring finger by the radial, ulnar, and median nerves ; a small area below the ulnar side of the wrist by the radial, ulnar, and musculo-spiral nerves ; and, more rarely, a very limited area situated more towards the radial side, by the radial, ulnar, and musculo-cutaneous nerves. He remarks that the amount of intercrossing appears to vary very greatly in different hands.

1051. *Bardeleben on the Position of the Female Pelvic Organs.*—1. When the bladder is empty, or slightly full, the uterus is normally anteverted, or, in children and girls, anteflexed. In fuller states of the bladder it is pushed upwards and backwards, and so may normally lie behind the axis of the pelvis. The uterus generally lies asymmetrically, usually on the right side of the middle line. The os externum lies at the level of a line drawn from the upper border of the symphysis pubis to the lower end of the sacrum. The causes of the anteversion are :—*a*, developmental, narrowness of the pelvis ; *b*, evolutionary, ventral position in quadrupeds ; *c*, mechanical, intra-abdominal pressure, action of round ligament, &c. 2. The shape of the female bladder may be spherical, ovoid, spindle (in young subjects), sagittally compressed, triangular on median section, &c. The uterus causes a depression on its wall which the author calls 'impressio uterina.' 3. The connection between bladder and cervix is variable in amount, and is formed by loose connective tissue with numerous blood-vessels. 4. The different accounts as to the position of the rectum are explained by differences due to age, condition, &c. It must be regarded as consisting of three sections, upper, middle, and lower. In the child the rectum in its upper part makes a curve with the convexity to the right ; the middle portion also bends

in the same direction. In the adult, through growth in length and purely mechanical causes, it becomes elongated, and its curves stronger and more numerous. Besides the convexity of the upper third to the right, we now find a convexity of the middle portion to the left. Besides these changes the very frequent elongation of the sigmoid flexure is of importance in connection with the position of the uterus. There hangs frequently a lengthy loop, often distended with fæces, from the edge of the left psoas into the posterior and upper part of the true pelvis, which pushes the uterus and left ovary to the right.

1052. *Kölliker on the Intermaxillary Bones.*—The author, in a communication criticising the theories of Biondi (given in the LONDON MEDICAL RECORDER, April 20, 1888, p. 139, Art. 318), thus summarises his views on this much-disputed question.—1. The inner and outer nasal processes unite together and enclose the nostrils. The inner nasal process unites with the superior maxillary process. 2. This union explains how the nasal process of the intermaxilla belongs to the outer wall of the nose. 3. The intermaxillary bone originates in the inner nasal process, and grows from there outwards round the nostril into the outer nasal process opposite to the superior maxilla and nasal bone. 4. The first appearance of the processus palatinus shows itself in the union with the intermaxilla. 5. The intermaxillary bone contains a single point of ossification (Pig.). 6. As the young human intermaxilla shows no separation, all obvious sutures of a later period are to be regarded only as fissures, since there is no known example where a singly formed bone has shown later separations and sutures.

1053. *Foot on the Sigmoid Valves.*—Dr. Foot, in a short note on the heart of a man in which the pulmonary artery only possessed two valves, states, as the result of his examination of cases on record—1. That numerical irregularities in the semilunar valves are more often observed in the aorta than in the pulmonary artery; and, 2. That defect in the number of valve segments is more rare than excess.

1054. *Cunningham on the Topographical Anatomy of the Brain.*—Professor Cunningham's observations are the outcome of his new method whereby he is enabled so to prepare the brain that when exposed it remains unaltered for at least twenty-four hours. He states that very little difference is to be observed in the relative length of the frontal, parietal, and occipital lobes above the age of five years. What differences there are can be readily accounted for by individual peculiarities. The temporo-sphenoidal lobe shows some interesting changes as age advances from childhood to adolescence. It is placed much more horizontally in the child; in the adult its tip is turned upwards and inwards, so as to give the long axis a curved direction. Again, its vertical depth in relation to the part of the cerebrum above the Sylvian fissure diminishes uniformly and steadily as adolescence and adult life is approached.

1055. *Cunningham on the Sacro-Iliac Joints in a Pregnant Woman.*—Professor Cunningham showed at the meeting of the Anatomical Section of the Royal Irish Academy of Medicine a specimen exhibiting great relaxation of the ligaments of the sacro-iliac articulation in a pregnant woman.

1056. *Birmingham on the Homology and Innervation of the Achselbogen, &c.*—The points sought to be established in this paper are (1) That pectoralis quartus is a segmented portion of the great pectoral; (2) That achselbogen is a derivative of panniculus; (3) That pectoralis quartus is supplied by internal anterior thoracic; (4) That achselbogen is supplied by internal thoracic; and (5) That the lateral cutaneous nerve of the thorax is the nerve of Wrisberg associated with more or less of the internal thoracic.

1057. *Hamilton on the Measurements of the Normal Heart.*—In a paper, the title of which is given above, Professor Hamilton, of Aberdeen, gives the following tables of measurements derived from the examination of twenty-seven males and four females, all over nineteen years of age, who were in perfect health at the time of death, and who were accidentally killed. The commonest weights were — male, 12 to 13 oz.; female, 10 to 11 oz. The weights ranged between 10 and 16 oz. in the male, and 7 and 15½ oz. in the female.

Diameters of Orifices—Male and Female.

	Greatest.		Least.		Average.	
	M. in.	F. in.	M. in.	F. in.	M. in.	F. in.
Aortic	1·3	1·0	·9	·8	1·0	·9
Mitral	1·8	1·5	1·1	1·0	1·4	1·2
Pulmonary	1·5	1·3	1·0	1·0	1·2	1·1
Tricuspid.....	2·2	1·7	1·3	1·4	1·8	1·5

His statistics showed that the taller the subject the larger the orifices, but that there were exceptions to this rule. From these and other figures he deduces the following :—

Table of Average Weights and Measurements of the Normal Heart.

Weight, 10-13 oz.

Diameters of Orifices.			Cavities and Walls.
Aortic	·9 in. to 1·0 in.		Left ventricle, 3 in. to 3⅜ in.
Mitral	1·2 ,,	1·4 ,,	Wall, ½ in. (at thinnest) to ½ in. (at thickest).
Pulmonary	1·1 ,,	1·2 ,,	Right ventricle, 3 1/16 in. to 3⅜ in.
Tricuspid	1·5 ,,	1·8 ,,	Wall, ⅛ in. all over.

1058. *Symington on the Bulbo-Cavernosi Muscles in Women.*—The observations were founded on sections made through the pelvis of a female, about 50 years of age. Each muscle was about 1·5 millimètre in thickness, and was placed external to the vestibular bulb. It was obvious, from their position and size, that they could have no appreciable effect in closing the vaginal orifice.

1059. *Symington on the Rectum and Anus.*—With regard to the third stage of the rectum, Dr. Symington says that it is generally described as passing downwards and backwards for about an inch and a half, and then ending in the anus. In entering upon an examination of this statement, it is necessary to consider what constitutes the anus as distinguished from the rectum. Those who describe a third part of the rectum as above, evidently mean by the anus the aperture situated opposite the junction of the skin and mucous membrane, in fact, a mere orifice or ring, and not a passage of any appreciable length. He believes that this view conveys an erroneous conception of the normal condition of the parts, and leads to incorrect ideas as to the physics of the pelvic floor and the mechanism of defæcation. The rectum is a receptacle for fæces or air, and these may be retained in it for a longer or shorter time; while the anus is a passage between the rectum and the exterior, which is surrounded by certain sphincters, and has its walls in close contact, except during defæcation. This passage, the anus or anal canal, is about an inch in length, and its long axis is directed downwards and backwards at about a right angle with that of the second part of the rectum. It includes what is frequently described as the third part of the rectum and the anus. With

respect to the action of the levatores ani in defæcation, his view is that when the fæces have been forced by vermicular contraction into the lower part of the rectum, they can assist the sphincters in preventing the passage of the fæces through the anal canal. During defæcation they will be relaxed along with the sphincters, the anal canal is opened and the ano-coccygeal body pushed downwards and backwards. Towards the end of the act of defæcation the levatores come into action in closing the anal canal and drawing the ano-coccygeal body upwards and forwards.

1060. *Pye on the Growth of the Bones of the Lower Extremities.*—The most rapid increase in height takes place during the first five years, and is about the same in boys and girls; for the next four years or so boys grow somewhat faster than girls. The period of greatest increase is in the first year, when it averages $7\frac{3}{4}$ inches; next in the second, about 4 inches; and thenceforward gradually declines to about $1\frac{3}{4}$ inches at the twelfth year (with frequent exceptions). It is stated that during the whole period of growth the lower extremities become five times their original length, while in the same time the head and neck only doubles its length, and the trunk only trebles it. But it is in the early years of life that by far the greatest thigh and leg growth occur; so much so, that by the end of the third year the lower extremities have already doubled their original length (the thigh now, as always, having grown a little more than the leg). The twelfth year is reached before they quadruple it, and the remaining years are required to complete the quintuple growth. It is obvious, therefore, that upon the growth of the legs and thighs in early life depends in an especial fashion the future stature of the individual, and that particularly during the years in which, it is believed, that children are specially subject to diseases arresting or retarding development. Mr. Pye's observations on children during this period are thus summarised. During the second year, the thighs grow at first at a rate of a little more than 1·7 inch, and the legs a little less than 1·7 inch a month; this gradually diminishes, until at the end of the year the rates are 1·10 and a little more than 1·12 respectively. During the third year the monthly growth-rate is a little more and a little less for thigh and leg than 1·12 inch, and so on, in diminishing rates, until the eighth year, when the monthly ratios have sunk to 1·18 and 1·20 inch.

1061. *Wenzel Gruber on Anatomical Abnormalities.*—1. *Double Maxillary Sinus.*—Amongst 200 skulls examined for the purpose the antrum was found to be double in three on the left side, in one on the right, and in one on both sides. Thus, amongst 400 antra, six, or 1·5 per cent., were divided into two or three secondary antra, five of which were completely shut off from one another and opened separately into the middle meatus; in the sixth the two posterior communicated with one another before opening into the nose. 2. *Double Foramen Rotundum.*—Out of more than 1,000 skulls examined two foramina rotunda on the same side were seen in only five, the anomaly being therefore a very rare one. The duplicity was always unilateral, and occurred four times on the left side and once on the right. The supernumerary foramen was always placed in the interval between the normal foramen and the inner end of the sphenoidal fissure, 2·5 millimètres from the former, 0·5–2 millimètre from the latter. Its width varied from 1 to 3 millimètres.

1062. *Trolard on the Anatomy of the Spinal Membranes, &c.*—1. The membranous sac of the cord does not descend lower than the second sacral vertebra, or rarely the third, being thus placed about 8·0 centimètres from the summit of the sacrum. 2. The sixth pair of sacral nerves never possess ganglia, and the fifth also often want them. 3. The fifth pair of sacral nerves arise from the sides of the terminal cone near its apex, the sixth at the middle part of the sacrum. 4. There is behind and at the sides of the sacrum a true plexus, constituted by the posterior branches of the four first sacral nerves, which, independently of the anastomotic network, situated at the level of the posterior sacral foramina, unite at the external border of the sacrum to form a posterior gluteal nerve. Besides this, the two last sacral nerves, united by an anastomotic loop, constitute a small plexus, from which arise posteriorly cutaneous branches, and anteriorly a musculo-cutaneous branch. BERTRAM C. A. WINDLE, M.D.

PATHOLOGY.

RECENT PAPERS.

1063. CAILLÉ, DR. A.—Prolapse of the Inverted Lower Portion of the Right Ureter through the Urethra in a Child Two Weeks Old. (*American Jour. Med. Sciences*, May 1888.)

1064. JANOSIK, J.—On the Histology of the Ovary. (*Sitzungsberichte d. Kais. Akad. d. Wissenschaften*, Band xcvi., Abt. iii., and *Centralbl. f. Gynäk.*, No. 30, 1888.)

1065. KORN, DR.—Congenital Left Diaphragmatic Hernia. (*Centralbl. für Gynäk.*, No. 32, 1888.)

1066. MIDDLETON, GEORGE S., M.D.—A Case of Congenital Disease of the Heart. (*Glasgow Med. Jour.*, July 1888.)

1067. SACK.—On Phlebosclerosis (*Ueber Phlebosklerose und ihre Beziehungen zur Arteriosklerose.*) (Virchow's *Archiv*, Band cxii., Heft 3, S. 403.)

1068. HEINEMANN.—On Mexican Yellow Fever (*Neue Beiträge zur Kenntniss des gelben Fiebers an der Ostküste Mexico's*). (Virchow's *Archiv*, Band cxii., Heft 3, S. 449.)

1069. BODENHAMER.—On the Anal Sacculi. Observations on the Normal Sacculi of the Anal Canal, both in Health and in Disease, &c. (*New York Med. Record*, May 26, 1888.)

1070. MEIGS.—On the Arteries and Veins in Bright's Disease. (*New York Med. Record*, July 7, 1888.)

1071. FERRARI.—On Experimental Closure of the Sinuses of the Dura Mater (*Ueber die experimentelle Verstopfung der Sinus Duræ Matris*). (*Med. Jahrb. von der K. K. Gesellsch. der Aerzte*, Jahrg. 1888, Heft 3, Wien.)

1072. DARIER.—On the Vessels of the Cardiac Valves (*Les Vaisseaux des valvules du cœur chez l'homme à l'état pathologique*). (*Arch. de Phys. Norm. et Path.*, 1888, No. 6, p. 151.)

1073. CARRIEN.—On Anthracosic Pneumonokoniosis (*De la pneumonokoniose anthracosique*). (*Arch. de Phys. Norm. et Path.*, 1888, No. 6, p. 180.)

1074. BALL, C. B.—Hydatid Cyst of the Deltoid Muscle. (*Dublin Jour. of Med. Sci.*, No. cc., Series iii., p. 132.)

1075. BENNETT, E. H.—Intra-uterine Amputations. (*Dublin Jour. of Med. Sci.*, No. cc., Series iii., p. 138.)

1076. SMIRNOW, G.—On Gastritis Membranacea (*Ueber Gastritis membranacea und diphtheritica*). (Virchow's *Archiv*, Band cxiii., Heft 2, p. 333.)

1077. Puschkareff, Dr. W.—On Recurrent Fever (*Zur pathologischen Anatomie der Febris Recurrens*). (Virchow's *Archiv*, Band cxiii., Heft 3, p. 421.)

1078. Thoma, Professor R.—On Aneurisms (*Untersuchungen über Aneurismen*). (Virchow's *Archiv*, Band cxiii., Heft 3, p. 505.)

1079. Dreyfuss, R.—On the Pathology of the Breast (*Zur pathologischen Anatomie der Brustdrüse*). (Virchow's *Archiv*, Band cxiii., Heft 3, p. 535.)

1080. Hamilton, D. J., M.B., F.R.C.S.E., F.R.S.E.—On the Effect of Chronic Disease of the Valves of the Heart upon the Sound Orifices, the Cavities, and the Walls. (*Jour. of Anat. and Phys.*, vol. xxiii., part i., p. 40.)

1081. Kirk, Robert, M.D.—Alcaptonuria. A New Acid found in Human Urine which darkens with Alkalies. (*Journal of Anat. and Phys.*, vol. xxiii., part i., p. 69.)

1082. Patella.—The Pathological Histology of Chorea. (*Gazz. degli Ospitali*, September 1888.)

1083. Sée, Professor Germain.—On Aneurisms of the Aorta. (*Bull. Méd.*, Aug. 22, 1888.)

Art. 1063. *Caillé on Prolapse of the Ureter in an Infant.*—A female child, aged 2 weeks, subject to diarrhœa from birth, was found to have a soft bluish pyriform tumour, the size of a walnut, protruding from the much dilated urethra. A lateral opening in the side of the tumour admitted the passage of a probe. The prolapsed tumour was reduced more than once, but came down again. After careful examination it was seen that the tumour or sac could neither be a prolapse of the vaginal wall nor a prolapse of the whole bladder. Not only could a probe be passed into the orifice of the sac, but also between the sac and the annular tumefaction encircling its base, the urethra in fact, the probe entering what was evidently the vesical cavity. The sac could be traced to an attachment to the right lateral aspect of the mucous surface of the bladder. On passing a probe into the lateral opening in the sac, a small hard tumour could be felt. The sac was ligatured and cut away, but the child died twelve hours afterwards. Both ureters were found dilated; the right was double, with double insertion into the hilum, both branches converging in their downward course and terminating in a single opening into the bladder. The point of insertion of the amputated sac was plainly visible on the inner surface of the bladder, and corresponded to the normal right ureteric orifice. The prolapsed sac, already amputated, was continuous with the mucous lining of the right ureter, and was, in fact, a prolapse of the inverted lower third of the right ureter into the bladder and through the urethra. The small solid tumour had blocked the ureter, and the pressure of the urine behind had forced it downwards; thus the tumour had dragged the ureter out of the urethra. The right kidney was cystic and suppurating, the left was in an advanced stage of interstitial nephritis, but free from abscesses. [The presence of a tumour was remarkable, and appears to justify Dr. Caillé's explanation. In some respects it is homologous to cases of intussusception, caused by the dragging of an intra-intestinal tumour. On the other hand, the ureteric orifice might have been abnormally wide, owing to some anomaly in development. The doubling and trebling of the ureter has been explained as representing an arrest in the differentiation between the mesonephros (Wolffian body) and metanephros (permanent kidney), a reversion to a lower type, in fact, as seen to a certain extent in adult amphibia. *See* Shattock, 'Bilateral Cystic Disease of the Kidneys,' *Trans. Path. Soc.*, vol. xxxvii., 1886.—*Rep.*]

1064. *Janosik on the Histology of the Ovary.*—Dr. Janosik investigated the process of follicle-formation in different animals, and finally examined the human ovary. In the ovary of the new-born child he found large and small follicles throughout its entire substance, even up to the attachment of the mesovarium. In the ovaries of all species selected by Dr. Janosik for examination, and in the human subject, he found processes of the Wolffian epithelium (*Markstränge*), but not to an equal extent, nor at the same period of life. These processes were developed to a different extent in different ovaries. In many ovaries special structures were associated with the Wolffian epithelial processes. Dr. Janosik considered that the structures were analogous to suprarenal capsules, although they did not form true suprarenal capsules, for which he had already claimed a double origin. Towards the surface of the substance of the ovary he found epithelial cords, united with the epithelium on the surface of the organ at many points. In every ovary an infinite number of follicles atrophy, even in their earliest stages of development. The process varies in different follicles, chiefly in the extent to which the cells of the granulosa play an active part. The connective tissue of the theca folliculi appear to give the primary impulse to the atrophic process. Dr. Janosik considers that the investing membrane of the ovum is simply a product of the granulosa. [Harz has already shown that the cords of Wolffian epithelium invade the ovarian parenchyma to a different extent in different species of mammals. This subject has an important bearing on the origin of papillomatous cysts of the ovary, and on the presence of papillomatous growths in some of the loculi of the common multilocular ovarian cyst. The epithelial cords or processes from the germinal epithelium were commented upon by Balfour and Foulis ten or twelve years ago; they were shown to be mere optical illusions, or, rather, terms which gave false ideas. Dr. Janosik's observations on the atrophy of a large proportion of follicles early in the course of their development are of high importance. The reporter believes that partially degenerate follicles may become the source of ovarian cystic disease.—*Rep.*]

1065. *Korn on a Case of Defective Development of the Diaphragm with Hernia.*—At the meeting of the Gynæcological Society of Dresden, May 2, Dr. Korn exhibited a new-born child with a large left diaphragmatic hernia. The mother was free from deformity, and had borne several other children all well formed. Labour was normal, the child began to gasp very soon after its birth. The pulsations of the heart were powerful, though rather slow: they were felt quite to the right of the middle line of the thorax. Notwithstanding every care, the infant could not be made to breathe regularly. After half an hour the heart ceased to beat. At the necropsy the diaphragm was found to have a very extensive origin on the right side, being connected with the eight lower ribs. But few fibres arose from the thoracic wall anteriorly, whilst on the left side the diaphragm was entirely deficient. Posteriorly, in the median line and to the left the abdominal and left thoracic cavities were continuous. The left lung was pressed upwards and backwards; it was atrophic, but still capable of holding air. The left thoracic cavity contained

nearly the whole stomach; several coils of small intestine, the ascending colon, cæcum and vermiform appendix, and the left lobe of the liver much hypertrophied. The heart normally formed, and the right lung distinctly hypertrophied, occupied the right pleural cavity. The left kidney was displaced downwards and inwards, lying on the sacral promontory; there were no other abnormalities.

ALBAN DORAN.

1066. *Middleton on a Case of Congenital Disease of the Heart.*—Cases of congenital disease of the heart are not by any means common, and the instance recorded by Dr. Middleton, and shown by him to the Medico-Chirurgical Society, exhibits several points of clinical interest. The patient, a girl of 10, was first seen in 1885, with no symptoms directly suggestive of heart-disease, but with a well-marked thrill over the heart's area and a loud systolic bruit accompanying it. At that time there was no cyanosis nor any alteration in the shape of the heart. The previous history threw no light on the origin of the cardiac condition. Only since the child had reached 8 years of age had any dyspnœa been noticed on extra exertion. Seen a year later the patient's tendency to dyspnœa had increased, and continued to do so during the following twelve months. The heart then began to show some signs of enlargement, but still there was no cyanosis. At the present time the girl is fairly well developed. The sternum is slightly prominent and there is a purring tremor to be felt over the upper part of the heart's area with a loud systolic bruit corresponding to it, but both the tremor and the bruit are confined to the base of the heart. The organ is considerably wider than normal, both pulses are feeble, but the left more so than the right; the right pupil is a little smaller than the left. A little clubbing of the finger ends can now be made out, but there is no general cyanosis, nor is the dyspnœa troublesome except on exertion. In his commentary upon this case Dr. Middleton points out that cyanosis is not always a feature of congenital heart-disease, and that the progressive widening of the heart's area of dulness, coupled with the fact that the loud bruit and strong thrill are most marked directly over the pulmonary valves, point to the case as one of contraction of the pulmonary artery, and this condition, according to the teaching of the late Dr. Peacock, is generally associated with a patent foramen ovale or a deficiency in the interventricular septum.

E. CLIFFORD BEALE, M.B.

1067. *Sack on Phlebosclerosis.*—The author concludes that arteriosclerosis and phlebosclerosis, as Thoma believed, are parts of a general disease of the vascular system. This occurs through disturbance of the general nourishment, which produces a weakening of the tunica media, of the arteries and veins. This leads to an expansion of their walls, and an enlargement of their lumina. This is followed by a connective-tissue thickening of the intima. These changes are further influenced by mechanical facts of two kinds. Arteriosclerosis nodosa localises itself, especially in those regions which exhibit a relatively high-pulse wave, and in which sudden but temporary increase of the heart's action produces relatively high increase of the blood-pressure. Arteriosclerosis diffusa and phlebosclerosis are found, on the contrary, in those parts in which, on account of different movements of the body, sudden and considerable alterations of pressure occur, whereby the regulation of the vascular tone is rendered difficult. They are also found in those parts where the action of voluntary muscle is less continuous, and in which an obstacle is placed in the way of the venous return by the positive pressure in the interior of the abdomen. Arteriosclerosis nodosa attacks the aorta and its larger branches; arteriosclerosis diffusa and phlebosclerosis the vessels of the extremities. Besides phlebosclerosis, a fibrous endophlebitis may be recognised, which is a local disease, in opposition to the former, which is general. It owes its local origin to abnormal stoppages of the venous blood.

1068. *Heinemann on Mexican Yellow Fever.*—The author makes the following observations on the pathology of this disease. If there has been no preceding disease of the liver, that organ is not enlarged. Microscopic examination shows in all cases a very considerable increase in the connective-tissue elements, which in many cases arises from inflammatory processes of older date. But its constancy is remarkable. Hæmorrhages and abscesses in the liver-substance were observed in some cases. In the colourless neighbourhood of these in every section numerous collections of round cells with plugged vessels could be recognised. The commencement of the liver affection becomes evident by loss of colour, which is not always regularly spread throughout, but often found confined to single parts. Increase of connective tissue was never found in the kidneys. Small extravasations were very commonly found in the neighbourhood of the capillaries. Very frequently the disease of the kidneys is confined to limited areas.

1069. *Bodenhamer on the Anal Sacculi.*—The author first quotes descriptions of the small sacculi, from two to five lines in depth, lying between the columns of the rectum, with their orifices pointing upwards. He next considers the question as to whether these sacculi, when morbidly affected, are identical with the preternatural pouches of the same region described by Dr. Physick. He believes that the two are distinct. Physick's pouches originate first of all by the formation of hæmatomata, the result of a small quantity of extravasated blood into the loose submucous tissue of the part, from the rupture of a venule or venous capillary, consequent sometimes upon violent straining efforts to expel indurated fæces. An encysted submucous hæmorrhoidal tumour, which may in process of time be absorbed, is thus formed, or its thin covering may burst or be ulcerated, and thus a preternatural pouch be formed. On the other hand, the normal sacculi may become diseased or degenerated. In health they have very small foramina and cavities, but in consequence of disease they may become relaxed and enlarged, and permit foreign bodies to enter. Such bodies produce great irritation, with a painful sense of distension of the delicate and highly sensitive parietes of the sacs, attended often with a burning, smarting itching, or tickling, which occurs soon after stooling, and lasts for an hour or two.

1070. *Meigs on the Arteries and Veins in Bright's Disease.*—The object of the paper, which is extensively illustrated, is to show that in the so-called chronic Bright's disease we have to deal with one which is widespread in its effects; that the most characteristic, and probably most important changes, so far as at present known, are those of the intima of the arteries, in which probably the veins always participate; that changes in the muscular coat and

adventitia, though often present, are by no means so important in their effects, and probably are secondary to those of the intima; that the process seems to be co-extensive with, and probably is a part of, the change in the large arteries which is so common and so well known as atheroma; and, finally, that it seems likely—in the absence of proof that changes in the nerve-substance are a necessary accompaniment, or, even if such were proved to be the case, the lack of knowledge that they antedated the disease of the blood-vessels—that the earliest of the now known pathological lesions to make its appearance is the change in the intima of the blood-vessels.

1071. *Ferrari on Experimental Closure of the Sinuses of the Dura Mater.*—The results of his observations lead the author to the following conclusions: 1. Closure of a sinus of the dura mater forms no obstacle to the circulation in the corresponding part of the brain, and causes no deep anatomical alterations therein. 2. It is possible to render a great portion of the sinuses—all those of the vault—impassable without injury to the function of the brain. A true thrombosis of the sinuses, even when very extensive, in the dog produces no symptoms whatever. 3. The closure of all passages for the return of blood from the cranium kills quickly, death being generally preceded by an epileptic seizure.

1072. *Darier on the Vessels of the Cardiac Valves.* The author's observations on the vessels of the cardiac valves in the normal state have already been referred to. The following are his statements as to the vessels und r pathological conditions. (1) Vessels may be found throughout the entire extent of the aortic and mitral valves; (2) these result as a new formation under the influence of inflammation; (3) the conditions which favour the development of this pathological vascularisation and the consequences which result from it are insufficiently known, but merit further attention; (4) the authors who have seen and injected a vascular network in the aortic and mitral valves have probably had to do with a pathological condition; (5) hæmatomata of the valves, which are so frequent in new-born children, are not in relation to vessels existing at the moment of birth; their formation appears to be connected with the process of regression of the vessels which exist in the valves in the fœtal state.

1073. *Carrien on Anthracitic Pneumonokoniosis.*—(1) Anthracosic pneumonokoniosis is a systematised chronic lobular pneumonia, that is to say, it has a characteristic anatomical disposition from its commencement; (2) this systematisation is regulated by the distribution of the lymph paths of the lobule, that is, it is at once peri- and centro-lobular; (3) it is distinct from chronic pneumonias and the different varieties of broncho-pneumonias; (4) even in the last period the process has still characters which are peculiar to it, and the clinical consequences which follow result from the systematisation which has been referred to.

1074. *Ball on a Hydatid Cyst of the Deltoid-Muscle.*—The tumour which was removed from the deltoid was about the size of a large grape. It contained hooklets and apparently was due to a cysticercus cellulosæ.

1075. *Bennett on Intra-uterine Amputations.*—The chief points of interest alluded to were the absence of neuromata on the ends of the nerves in the intra-uterine as compared with large and well-defined tumours in the surgical stump. Also the fact that all these intra-uterine amputations had been disarticulations, and each preserved almost a complete joint between the extremities of the bones and the soft structures of the ends of the stumps.

1076. *Smirnow on Gastritis Membranacea.*—1. The process does not commence with inflammation but with a necrosis of the preformed tissue which goes with the formation of hyaline products. 2. These products afford the chief material for the development of the membrane of the first formation. 3. When inflammatory changes take place in pharyngeal diphtheria, this is a later occurrence, evidently at the appearance of the period of reaction.

1077. *Puschkareff on Recurrent Fever.*—I. *Spleen.* 1. An accumulation of round-formed elements takes place both in the Malpighian corpuscles and in masses in the spleen pulp. 2. Corresponding to each single attack fresh morbid masses appear. 3. On the ground of microscopical examination of the spleen the observer is always in a position to state whether death occurred during the crisis or in an interval, if the latter has not lasted more than five days. 4. The number of large granular polynucleated elements in the pulp, as well as in the splenic vein, increases with the number of attacks. 5. The endothelium of the vessels is much swollen, more so in the veins than in the arteries. 6. The veins emerging from the infarct are constantly filled with white thrombi; the arteries, on the contrary, are empty. 7. The macroscopically visible infarcts are the expression of a venous thrombosis and its consequences. II. *Liver.*—1. The blood-vessels are constantly altered; their endothelium becomes swollen, falls off, and the capillaries are strongly dilated. 2. The amount of the capillary dilatation stands in relation to the number of the attacks. 3. In the intervals the capillaries return relatively to the normal. 4. From the microscopic preparations of the liver in cases of death during an attack, or soon after, the number of the attacks can be decided with a certain amount of probability. The breadth of the capillaries and their contents must be kept in mind. 5. The old process in the liver, which finds its expression in the increase of rich connective tissue, is often exacerbated. 6. The acute granular inflammation of the interlobular connective tissue occurs only in the form of an exacerbation of the chronic. 7. In jaundice, accompanying recurrent fever, the small biliary passages are always parenchymatously inflamed. 8. The more the biliary passages approximate to the normal the weaker is the jaundice clinically. III. *Kidneys.*—1. The kidneys always show the appearance of a parenchymatous affection. 2. They show also appearances of an acute interstitial inflammation, but only on the foundation of the chronic one. 3. An acute glomerulo-nephritis, not of high grade, is also a constant accompaniment of recurrent fever. 4. The vascular endothelium shows constantly traces of albuminous cloudiness. 5. The biliary pigment is only secreted by the normal epithelial cells, and fails therefore in the affected tubes. IV. *Heart.*—1. The nerve-cells of the heart-ganglia show appearances of albuminous swelling. 2. The cell capsule is thickened, its endothelium swollen, and, in places, arranged in several layers. 3. The presence of pigment in the nerve-cells stands in relation with the age of the individual.

1078. *Thoma on Aneurisms.*—At the close of a lengthy series of articles on the subject of aneurisms, Professor Thoma proposes the following classification :—I. *Aneurisma congenitum* comprises aneurisms which appear evidently in the fœtal period or at the time of birth. They are not to be confounded with the so-called congenital aneurism of Eppinger. Two cases of aneurisms of the ductus Botalli belong to this class, as dilatation aneurisms of the duct remaining open. II. *Aneurisma arterio-scleroticum. a.* By dilatation. 1. Diffusum. 2. Fusiforme simplex. 3. Fusiforme multiplex. 4. Sacciforme. 5. Skenoideum. *b.* By rupture. 1. Dissecans. 2. Sacciforme. 3. Varicosum (rupture into a consecutively dilated vein). III. *Aneurisma traumaticum.* 1. Diffusum. 2. Circumscriptum. 3. Varicosum. 4. Varix aneurismaticus. IV. *Aneurisma embolicum.* 1. Simplex, arising from simple emboli (Ponfick). Two cases belong here of sacciform rupture aneurisms with new-formed connective-tissue walls. In preparations embedded in celloidin sharp needle-like calcareous fragments were visible in the lumen of the vessel. The fragments arise often from the heart-valves, and send one or two needle-like processes into the neck of the aneurism sac. 2. Infectiosum, arising from infectious emboli (Eppinger). V. *Aneurisma per arrosionem—e.g.* arrosion aneurisms of the pulmonary artery (P. Mejer, Eppinger). VI. *Aneurisma cirsoideum* (neuropathic?) The aneurisms of the brain artery without difficulty find place in the second and fourth categories, whilst multiple aneurisms of smaller and medium-sized arteries (Rokitanski, Kussmaul-Maier, and P. Mejer, congenital aneurisms of Eppinger) must for the time occupy a separate position until their etiology is more accurately known.

1079. *Dreyfuss on the Pathology of the Breast.—Cysto-sarcoma.*—1. The dilatation of the excretory ducts does not always keep equal pace with the sarcomatous (fibromatous) proliferation of the peri-canalicular connective tissue, in the sense that only through sarcomatous (fibromatous) metaplasia of this connective tissue, of the adventitia of the canals, the epithelium of the surface can increase ; but the increase of the membrana propria of the excretory ducts, and therewith the dilatation often (perhaps always ?) precedes this adventitial proliferation, and certainly has to do with the proliferation of the spindle cells of the membrane. The adventitious connective tissue around the duct must increase independently. The membrane lies in folds, but does not usually change its character. 2. The stellate cells of the membrana propria diminish in the adventitious origin of the tumour. 3. The structureless layer of the normal membrane consists of fine, wavy fibres, or at least is so thinned that the connective tissue which lies underneath it comes to lie in its place. 4. The lowest germ epithelium lying under the epithelial covering, described by many authors, is nothing else than the prominent body of the spindle cells of the membrana propria.

1080. *Hamilton on Chronic Disease of the Valves of the Heart.—Effects of Chronic Disease of One Orifice upon the Size of the Others.*—The only lesions of the valves of the left side which are accompanied by any appreciable distension of the otherwise sound orifices are uncomplicated aortic regurgitance with a wide orifice, and uncomplicated dilatation of the mitral. In the former of these the other three orifices were considerably above the average diameter, and in the latter both the pulmonary artery and tricuspid were distended, while the aortic remained of natural size. As regards the other classes, it may be noted that where incompetence of a valve was accompanied by constriction of the orifice the remaining apertures were not sensibly affected, the legitimate conclusion deducible from this being that constriction of an incompetent orifice exerts a salutary influence in preventing distension of the other orifices of the organ. *Hypertrophy and Dilatation from Valvular Disease.*—1. Aortic.—The overwork performed by the heart, in aortic regurgitance with a normal-sized orifice, is chiefly that of keeping up the ventricular tone. If dilatation of the ventricle co-exist, increased propulsive efforts may be required. The chief overwork performed by the heart, in aortic regurgitation with a wide orifice, is in keeping up the tone of the ventricle. The overwork performed by the heart where the aortic valve is incompetent and constricted is twofold—namely, (1) that of keeping up the tone of the ventricle, and (2) that of driving the blood through a narrow orifice. 2. Mitral.—In mitral incompetence with stenosis, the aortic valve being normal, slight hypertrophy of the wall of the left ventricle is induced. 3. Mitral and aortic combined.—When both valves are constricted and incompetent, the increased work performed by the left chambers of the heart is in keeping up the arterial pressure. Part of the energy so liberated is expended upon the pulmonary circulation, which, by raising the pressure within the pulmonary vessels, necessitates increased effort on the part of the right ventricle in opening the pulmonary artery valve. This is frequently followed by hypertrophy of the ventricular walls. The unusually energetic contraction also reacts upon the naturally incompetent tricuspid, and renders it more incompetent, thus affecting deleteriously the whole venous circulation.

1081. *Kirk on Alcaptonuria.*—This condition has previously been investigated by Bödeker, who isolated a substance which he called alcapton, by Ebstein and Müller, who found, as they supposed, pyrocatechin, and by Professor Smith, of Dublin, who discovered protocatechuic acid in the urine. Dr. Kirk's researches confirm those of Bödeker to a certain extent, though that observer did not isolate alcapton in a pure state. The urine in this condition, he states, does not contain a trace of either pyrocatechin or protocatechuic acid.

BERTRAM A. WINDLE, M.D.

1082. *Patella on the Pathological Histology of Chorea.*—Professor Vincenzo Patella expresses the opinion that evidence is now accumulating which goes far to show that chorea can no longer be looked upon as a pure neurosis, but that it has a definite morbid anatomy. He showed at a meeting of the Medico-Chirurgical Society of Pavia some sections of the brain of a child of 11 who had died of chorea associated with rheumatism, pericarditis, and left lobar pneumonia. A careful examination of the brain revealed several areas of softening from ½ to 2 millimètres in diameter, in the subcortical part of the convolutions, and chiefly in the occipital lobes. The sections were prepared according to several different methods, and all showed degeneration of the nerve elements, fatty degeneration of the cells of the neuroglia, with multiplication of the nuclei in the neighbourhood. Some of the preparations showed the blocking of a vessel leading to the spot. He came to the conclusion that the areas of softening were the result of embolism. The accuracy of the

author's description of the changes was confirmed by Professor Golgi, who coincided in the view that they were due to embolism.

H. HANDFORD, M.D.

1083. *Sée on Aneurisms of the Aorta.*—The author points out the relationship which exists between thoracic aneurism and pulmonary phthisis, the frequency of which had already been alluded to by Hanot. Aortic aneurism is often complicated by tuberculosis, a fact which he attributes to interference with the exchange of gases, thus favouring the development of tubercle. M. Sée condemns unhesitatingly all operations for the relief or cure of thoracic aneurism, and would confine treatment to the iodides and antipyrin.

ALFRED S. GUBB.

TOXICOLOGY AND MEDICAL JURISPRUDENCE.

RECENT PAPERS.

1084. PEABODY, G. I., M.D.—Two Deaths from Poisoning by Chlorate of Potash. (*Med. Record*, July 21.)

1085. MCGASTON, J. F., M.D.—Permanganate of Potash for Snake Bites. (*Albany Med. Annals*, May.)

1086. PUTNAM, JAMES J., M.D.—Motor Paralysis from Medicinal Doses of Arsenic. (*Boston Med. and Surg. Jour.*, June 28.)

1087. NORDERLING, K. A., M.D.—Poisoning by Kerosene. (*The Medical Record*, July 21.)

1088. HIGGINS, F. W., M.D.—The Possibility of Air in the Heart in certain Cases of Infanticide. (*Medico-Legal Journal*, June 1888.)

1089. HONMAN, DR.—On a Fatal Case of Camphor Poisoning. (*Australian Med. Jour.*, June 15.)

1090. ELIOT, LLEWELLYN, M.D., and MCKONE, J. J., M.D.—Two Cases of Poisoning. (*Journal of American Medical Association*, Sept. 1.)

1091. SIMES, DR. HENRY C.—On the Injection of Cocaine into the Urethra with a Fatal Result. (*Med. News*, July 21, 1888.)

1092. DURET, DR.—On Iodoform Poisoning. (*Rev. de Thérap.*, July 15, 1888.)

ART. 1084. *Peabody on Deaths from Poisoning by Chlorate of Potash.*—The first case was that of an Irish servant girl who had taken by mistake two tablespoonsful of chlorate of potash fourteen hours before she came under observation. She was in a state of profound prostration, her face was cyanotic, pulse 136, respiration 32, she was at intervals very restless. She had vomited several times. Her temperature was 104°, whisky and digitalis were administered both by the mouth and subcutaneously, and hot bottles were applied to her feet. During the night her bowels acted three times, the fæces being dark-coloured; the urine was a chocolate colour, and was found to contain many blood corpuscles, large masses of altered hæmatin, and much albumen. Next morning her temperature was 99°·4, but rose again in the middle of the day; the heart's action remained very weak. Oxygen gas was given freely, without, however, any improvement resulting, either in her colour, pulse, or general condition. She was intensely anæmic, but very much cyanosed, and died 37½ hours after taking the poison. On *post mortem* examination the blood in all the great vessels was liquid, and of a dark chocolate colour. The heart was soft and flabby, and the left ventricle slightly dilated; the cut surfaces of the lungs were very brown in colour. The spleen was large, firm, and chocolate-coloured; both kidneys were diffusely stained with chocolate-coloured blood. Microscopically there was extensive fatty degeneration of the heart, and the straight tubes in the pyramids of the kidneys were found distended with broken-down blood-corpuscles and methæmoglobin. With the spectroscope the blood revealed the spectrum of methæmoglobin. The second case was that of a man, aged 53, who had enjoyed good health except for a chronic throat trouble, for which he was in the habit of taking chlorate of potash. After his death it was stated that he had been in the habit of purchasing this drug by the pound, and that he had used over a dozen of the pound cans in the course of the preceding twelve months. On the first day of his illness he felt feverish, and complained especially of sore throat and pain in the back, and he was known to have taken more chlorate of potash than usual in consequence. Next morning his pulse was 100, his temperature 102°, and he was jaundiced. Later on he vomited and passed some dark green motions, and his urine was black in colour, his pulse was imperceptible, he was of a yellowish grey colour. The vomiting continued. The next day his pulse was better, and the vomiting had ceased; but the jaundice was deeper, and there was suppression of urine. From this time there was no marked change in the symptoms, the vomiting did not return, and the suppression of urine remained absolute. He died on the fifth day from the first symptoms of indisposition. The *post mortem* appearances as regards the heart, blood, spleen, and kidneys were very similar to those in the case just quoted. Dr. Peabody concludes that if called upon to treat a case of this kind copious venesection would be indicated, and the replacing of the poisoned blood by healthy blood by means of transfusion.

1085. *McGaston on Permanganate of Potash for Snake Bites.*—Dr. McGaston reports the following case. The patient was bitten on the end of the third finger. A ligature was immediately tied round the finger below the first joint. He saw the patient within a few minutes, and injected some solution of permanganate of potash (gr. 2 ad 1℥) as soon as possible, the point of the needle being introduced at the hole made by the fang. The ligature was then released, and the patient complained of great pain in the part for a few minutes. There was a dusky ashy hue extending around the point where the injection penetrated, which gradually passed away in the course of fifteen minutes. Some swelling of the finger and arm occurred during the following day, but he completely recovered. Dr. McGaston states that it is a well-recognised treatment in Brazil, where the Government awarded a considerable sum as a bonus to the discoverer of this method of treatment.

1086. *Putnam on Motor Paralysis from Medicinal Doses of Arsenic.*—Dr. Putnam points out that acute arsenical paralyses are known in the first place by the topographical distribution of the symptoms. All the four extremities are usually attacked almost simultaneously, and the muscles of the trunk often become more or less weakened; the legs usually suffer more than the arms, and the extensor muscles more than the flexors. The paralysis is usually more severe in the distal than in the proximal muscle groups. A second characteristic is that there are usually disorders of sensibility, and often severe pains, mostly referred to the joints; anæsthesia and analgesia may be present. The electrical reactions

of the nerves are usually diminished to both currents, but may be normal, or may even be increased; the knee-jerk is usually absent. A third characteristic is that the paralysis is apt to be accompanied with marked debility, depression of nerve force, and drowsiness. He records a case in some detail. The patient, a man, aged 63, had been taking Fowler's solution for the relief of asthma for about six weeks, and had taken in all an ounce or an ounce and a half when he began to suffer from pain on the under surface of the thighs, and found some difficulty in rising from his chair; later his shoulders began to be painful on exertion; these symptoms continued; he lost strength, and became drowsy and also restless, especially at night. The upper part of his arms soon became so painful that he could not hold a book to read. The loss of power was especially marked in the arms in reference to the movements of the shoulder-joints, and in the legs in the muscles of the hip-joints. No movement was absolutely lost, and the muscles did not show the reaction of degeneration. The patient recovered in the course of six or seven months, but the case was somewhat complicated by the fact that for a period of two months about three months after the onset of the malady he slept in a room where the wall-paper contained arsenic, to which the arsenic discovered in the urine at this time was probably to be attributed. Although in the early stages the disease presented some features suggestive of progressive muscular atrophy, Dr. Putnam believes, no doubt correctly, that it should be regarded as one of multiple neuritis due to arsenical poisoning.

1087. *Norderling on Poisoning by Kerosene.*—A female infant, aged 11 months, was seen by Dr. Norderling ten minutes after swallowing an unknown quantity of kerosene; the patient was then drowsy, feverish, with cold extremities, the pulse 150, respirations 40, face and neck covered with perspiration. The mother stated that directly after she took the poison her face became dusky. After an emetic she vomited, and on the top of the vomited matters the kerosene could be seen floating. She passed a restless night, and next day at noon her pulse was still 150, the temperature was 104°, she was still drowsy, the bowels had acted freely after castor-oil, and from this time she rapidly improved, so that by the next day she was quite well.

1088. *Higgins on the Possibility of Air in the Heart in certain Cases of Infanticide.*—Dr. F. W. Higgins records the subjoined case. In February 1888 a man was convicted of infanticide under the following circumstances:—The mother of the child was his unmarried daughter, and he was believed to have been the father. The infant was born whilst she was alone; she called to her father, who came and cut the umbilical cord close to the body; he then grasped the child's neck by the thumb and finger of one hand; with the other he laid a cloth in the bottom of a tight tin pail, laid the child in the pail on its right side, still retaining his hold upon the child's neck, threw the cloth over it, took the pail by the edge and carried it out of the house. Within an hour he buried the pail and its contents in a field two feet below the surface. The body was exhumed twenty-one days after burial; it was that of a full-term infant and the lungs had been fully expanded by respiration. The auricles were found nearly empty; both ventricles were filled with dark fluid blood mixed with an abundance of air-bubbles. Three explanations of this phenomenon are suggested by Dr. Higgins, viz.: First, that it was due to putrefaction. He rejected this hypothesis on the ground that putrefaction had hardly commenced, except to a very slight extent, in the skin, and not at all in any of the internal viscera. A second explanation would be rupture of the lung-substance and escape of air into the pulmonary veins. This was excluded by the fact that no rupture of the lungs had taken place; they were not even engorged. The third explanation, and the one that he accepts, is that air was drawn in through the cut end of the umbilical vein during the respiratory efforts whilst strangling. He points out that the facts of the case would fit in well with this explanation. Only a quarter of an inch of the cord was left attached to the body, unligatured; the violent spasmodic movements of the abdomen during strangulation would open the umbilical vein intermittently at least, and a distance of about two-and-a-half inches would reach the vena cava. The suction power exerted was the greatest possible. The return of blood from the head was entirely cut off, the heart was beating wildly, this *vis a fronte* would tend to draw in air through the open channel to supply the place of the blood imprisoned in the head and lost by the umbilical arteries; the suction force exerted by the respiratory efforts would be still more powerful. The presence of air in both sides of the heart was due to the patent foramen ovale. Dr. Higgins thinks that if this sign should be found again under similar conditions it might be considered to have some value as an evidence of live birth.

1089. *Honman on a Fatal Case of Camphor Poisoning.*—At a meeting of the Medical Society of Victoria, Dr. Honman related the following instance of a somewhat rare occurrence—viz., fatal poisoning by camphor. The patient was a barmaid, aged 18, who was seen by him at 11 o'clock one morning in a state of unconsciousness; the pupils were dilated, the legs cold, the pulse was thready and could not be counted, the face was pale, pressure on the pit of the stomach seemed to cause pain. As there was an odour of camphor in the breath the stomach-pump was used, and the stomach washed out, the contents smelling strongly of camphor. Ether was injected hypodermically, with some temporary benefit. A convulsive movement of the lower extremities began to set in, which gradually extended higher, and as the symptoms became worse the injection was repeated. Complete paralysis of the lower extremities followed, the convulsive movements of the body extended higher, and at last the arms became affected, the breathing became more and more shallow, and there was a little rise of temperature. She died on the following morning between 3 and 4 o'clock. The urine was free from albumen. The *post mortem* analysis of the stomach showed the presence of camphor, but not in large quantity; no solid camphor was found. It was ascertained that the girl was rarely without camphor in her pocket, and that she had constantly expressed her liking for it. On the evening in which she was taken ill she had been seen with some in her hand, and had offered some to her bedroom mate; she began vomiting during the night, and at 10 A.M. was found by the mistress in a state of unconsciousness. The quantity she had taken could not be estimated, even approximately, as she had presumably expelled most of it by vomiting before she was seen, and the vomited matters had not been saved.

1090. *Eliot and McKone on two Cases of Poisoning; a Case of Poisoning by Sulphate of Atropia: Recovery.*—Dr. Eliot records the following. A woman, aged 26, under treatment in hospital for rheumatism, drank by mistake a solution of sulphate of atropine containing four grains of the salt. In fifteen minutes she complained of a dryness in the mouth, tickling in the throat, difficulty of swallowing, and hoarseness. Very soon she became light-headed, with hallucinations and confusion of thought, headache, and disordered vision; she staggered in her gait, and was unable to articulate clearly. An hour later she was seen by the doctor; her pupils were enormously dilated; there was absolute impossibility of swallowing, constriction of the throat, tongue, gums, and entire mouth perfectly dry, voice very husky, violently delirious, singing and crying and fighting, pulse 140, respirations 50, temperature normal. She was given a subcutaneous injection of one-twelfth of a grain of apomorphia, which failed to make her vomit, though it was repeated. She was then given one-third of a grain of morphia hypodermically. In twenty minutes, her condition remaining the same, this was repeated, and a third injection was given in thirty minutes. After this she was quieter, and all her symptoms improved. Thirty minutes later the injection was once more repeated, making a total of 1⅓ grain of morphia given in 80 minutes. Respirations then fell to 10 in the minute and were laboured, the pulse remained at about 100, becoming feebler. The pupils soon became contracted and the breathing stertorous; strong coffee was then given by the rectum, and citrate of caffeine was administered in 1-grain doses hypodermically every hour for about three hours; she could then be roused by shaking. Seven hours after taking the poison she was practically out of danger. Dr. Eliot concludes his paper with a summary of cases of poisoning by atropine hitherto recorded in Great Britain or America. Dr. James McKone records the following: A married woman, aged 35, drank some beer which had by mistake been put into a tumbler containing a solution of atropine, and also gave her little child, aged 2 years, some to drink. A quarter of an hour later she complained of dizziness, ringing in the ears, and dryness of the throat; she then walked to the hospital, when her pupils were found to be widely dilated, her skin hot, dry, and flushed, pulse rapid, and respirations shallow. The stomach was washed out three times, the patient became slightly delirious and then passed into a state of coma. Morphia (½-grain) was injected subcutaneously, a large quantity of tannic acid was given by the mouth, and the body sponged with iced water. Thirty minutes after admission the pupils were fully dilated, the respirations were 20 and very shallow, the pulse 180 and very weak. Brandy, ether, and ammonia were administered hypodermically, and a mustard-plaster was applied over the heart and to the feet. At the end of two and a half hours the respirations were deeper, and the patient could be made to swallow. Five-minim doses of tincture of digitalis were given at short intervals, and strong coffee. The patient gradually improved, and was rational in about six hours. The child presented general muscular twitchings, dryness of the throat, extreme dilatation of the pupils, and a scarlet rash all over the body. Some brandy with five grains of bromide of potassium was given her, and the body wrapped in wet towels. She was allowed to drink iced water. At the end of two hours the twitchings ceased, and she soon recovered.

1091. *Simes on the Injection of Cocaine into the Urethra with a Fatal Result.*—A man, aged 21, was admitted on Feb. 23 with history of stricture of the urethra, for which internal urethrotomy had been performed. A small fistula was found on the site of the perineal incision, and a stricture was detected 4½ inches from the meatus, admitting a No. 11 French bougie. Previous to performing internal urethrotomy, a drachm of a 20 per cent. solution of muriate of cocaine was injected into the urethra by means of a long-nozzled urethral syringe. The instrument had hardly been removed when the patient made a silly observation, with staring eyes, dilated pupils, twitching of the facial muscles, congested face, laboured respiration, and finally a violent epileptic convulsion lasting some seconds. These convulsions recurred with increasing violence several times a minute. Then respiration began to fail, and the heart's action became irregular and slow. The breathing became more and more laboured, and the skin generally became deeply cyanosed, and at the end of twenty minutes from the first convulsion the man died. Energetic treatment was resorted to, but seemed without effect on the symptoms. At the autopsy the right side of the heart was empty, the left side being filled with clots. The viscera were markedly congested, as was also the brain.

1092. *Duret on Iodoform Poisoning.*—The author describes three distinct forms of iodoform poisoning:—1, the eruptive form; 2, the cerebral or delirious form; and 3, the syncopal or hypothermic form. The eruptive form is the most common. It is characterised by a reddish eruption which appears on different parts of the body far removed from the seat of absorption. It is probably due to irritation of the glandular structures set up during the elimination of the drug. The cerebral or delirious form is characterised by epileptiform attacks of insomnia, with delirium. He had seen several examples of this in M. Verneuil's wards. The syncopal form is by far the gravest of the three. In this form absorption is followed by a fall in the temperature and collapse. The symptoms generally disappear when the use of the drug is discontinued, but, in addition to its toxic properties, iodoform is apt, under certain circumstances, to give rise to the same local irritation as any other powder.

ALFRED S. GUBB.

DERMATOLOGY.

RECENT PAPERS.

1093. CHRISTIANI.—On Malarial Urticaria. (*Lo Sperimentale*, June 1888.)

1094. VELSOR, DR. VAN. — On the Treatment of Scrofula by Iodia. (*Med. Press and Circular*, June 1888.)

1095. WETHERELL.—On the Treatment of Eczema. (*Lancet*, June 1888.)

1096. PEARSE.—On the Alkaline Treatment of Eczema. (*Lancet*, July 1888).

1097. RICHARDSON.—On the Ethylates of Sodium and of Potassium in the Treatment of Nævus. (*Asclepiad*, August 1888.)

1098. LELOIR, M.—On Alopecia. (*Rev. Gén. de Clin. et de Thérap.*, June 28, 1888.)

1099. LEMOINE, DR. G.—On the Treatment of Epithelioma by Chlorate of Potassium. (*Revue Gén. de Clin. et de Thérap.*, July 5, 1888.)

1100. Treatment of Erysipelas by the Local Application of Antiseptics.

1101. BERTOLUS, DR.—On the Use of Carbolic Acid in Affections of the Skin. (*Bull. Méd.*, Aug. 26, 1888.)

ART. 1093. *Christiani on Malarial Urticaria.*—The field of observation of which the author has availed himself is the Tuscan Maremma, a district in the North of Italy of especially evil repute for malarial disease. Frank was the first to describe malarial urticaria as observed by himself in a series of cases at Pavia. Since that time much has been written on the subject, notably by Griesinger, Cantani, Strümpell, Dieulafoy, Neumann, Hebra, Carpani, Niemeyer, and Tilbury Fox. Of the four cases observed by the author all occurred in young subjects, aged respectively 12, 13, 20, and 24 years. In two the type of fever was tertian; in one, quotidian; and the last case was a pernicious form, rapidly fatal by coma. The eruption comes out at the beginning of the second, or hot, stage, and disappears during the third stage, on the advent of free sweating. It reappears with every attack; and is, like the fever, cured by quinine. Borsieri, Puccinotti, Griesinger, and others have noticed that it is more common in some years, and at certain times of the year, than others; but the author thinks that this is merely coincident with the greater frequency and severity of intermittent fever during those periods. The eruption comes out chiefly on the abdomen, the trunk, the limbs, and especially the anterior (extensor) surfaces of the upper arms and thighs. It very rarely affects the neck or face. In this latter position the author has only seen it once, and then in a very severe case—of the comatose type—with prolonged hot stage and very high temperature. In a first attack, and when the temperature does not exceed 104° F., the eruption is usually discrete, but in severe cases it becomes confluent. Urticaria is also met with in other acute infectious diseases, but in none of them is it so frequent as in malaria. And, further, when it does occur it is either at the beginning, when it soon gives place to the special eruption of the disease; or else it appears at very variable periods. In malaria it appears with great regularity during the second stage. In typhoid fever, if urticaria occurs, it is in the beginning of the second week, or, as Lesser states, during convalescence. In small-pox it may appear during the first few days, and then it somewhat closely resembles malarial urticaria; but on close examination it is found to be mixed up with a measly rash which is characteristic of this condition. As regards its prognostic importance, Merklen and Verneuil do not consider it of much value, because it occurs in slight cases, as well as in severe and in pernicious ones. But Vallin, Puccinotti, and Scopetani, on the contrary, consider it an indication of a very severe and grave case, and not improbably of the pernicious form. With this latter opinion the author's experience agrees. Such cases urgently call for prompt treatment, and the most speedy remedy is the hypodermic injection of the hydrochlorate of quinine. [The hydriodate appears to be the best preparation for hypodermic injection, but even this gives rise to considerable pain.]

H. HANDFORD, M.D.

1094. *Van Velsor on the Treatment of Scrofula by Iodia.*—In the *Med. Press and Circular*, June 1888, p. 584, Dr. Van Velsor draws attention to the case of a young girl suffering from scrofula, and the successful treatment of the same by administering iodia for a prolonged period. The patient had suffered from childhood with different symptoms of scrofula, and had had chronic ulcerations in different parts of the body. The family history was very bad, several members of the family for two generations had died from tuberculosis. A few months before she was seen by the author there had been some slight necrosis of the tibia, and the wound had been several weeks healing. For a period of fifteen months iodia was given in half-drachm doses four times daily, alternating it with syrup. iod., iron, and cod-liver oil for short intervals. The result was the disappearance of all signs of scrofula, and, though a careful watch was kept over the patient for some months after the treatment was abandoned, no signs of the disease showed themselves. Iodia has in its combination, besides iodide of potash, certain very desirable drugs, such as phosphate of iron, stillingia, saxifragra, menispermum, &c. In combination with mercury the author has found it most valuable in the constitutional treatment of syphilis.

1095. *Wetherell on the Treatment of Eczema.*—In the *Lancet*, June 1888, p. 1074, Mr. Wetherell, M.B., states that he has discovered a new method of treating chronic eczema. The author, after many years, has cured himself of eczema of the fingers by the following plan. Pieces of lint, sufficient to surround the fingers separately, are dipped in pure liquor carbonis detergens, and applied at bedtime with gutta-percha tissue over them; these are kept on all night. During the day the hand is left exposed, or, better still, kept covered with a thin kid-glove. Every third day they are washed with lanoline coal-tar soap. To render the skin more pliable and soft a little lanoline is rubbed in every morning. In the course of three or four days the upper hardened cuticle comes off in large flakes, leaving a clean smooth surface, healthier-looking and not so subject to the return of eczema. If there be much heat or redness then the alcoholic solution of coal-tar must be diluted with (1 to 10 or 20) cold water. Bathing with saline or alkaline waters, such as are found at Harrogate, Bath, &c., alternating or combined with the application of spirituous alkaline lotions, is very useful in cases where the disease is extensive, or where there is much exudation. In the way of diet, all stimulating and indigestible substances such as pickles, tea, &c., should be avoided. The chief materials should be lean meat, milk or cocoa, stale bread, fresh vegetables (except potatoes), no pastry, no beer or malt liquors. Plenty of exercise and fresh air, with care in clothing and attention to regulation of the bowels, are essential.

1096. *Pearse on the Alkaline Treatment of Eczema.*—In the *Lancet*, July 1888, p. 63, Dr. Pearse states that for many years he has treated cases of eczema with alkaline applications. Acting on the principle that acids applied to an acid-secreting surface, and alkalies to an alkaline surface, diminish the respective secretions, the author was led to try the effect of a solution of bicarbonate of soda as an application to a raw eczematous surface. In the case of scrofulous children, and in the general eczema of infants, much value will be found in giving internally a little nitro-hydrochloric acid combined with sulphurous acid, and at the same

time using externally a solution of bicarbonate of soda (5 to 10 grains to the ounce), or a weak solution of liquor potassæ (10 to 30 drops to the ounce), combined with a little glycerine. As a rule, the more copious the exudation the weaker must be the application; it should be applied, whenever possible, continuously. In chronic cases an ointment can be used, composed of 10 to 30 grains of bicarbonate of soda to the ounce of vaseline. [For the last quarter of a century alkalies, both internally and externally, have been highly valued in the treatment of eczema of all parts.—*Vide* Section 48 : 3 of the *Medical Digest.*]

1097. *Richardson on the Ethylates of Sodium and of Potassium in the Treatment of Nævus.*—In the *Asclepiad*, August 1888, p. 229, Dr. Richardson gives an account of the preparation of ethylate of sodium ; this is done by treating absolute alcohol with pure metallic sodium. So soon as the sodium comes in contact with the alcohol there is free escape of hydrogen, and the addition of sodium has to be continued until action ceases. A thick white product is the result, which is a saturated solution of sodium alcohol. The change of ethylic alcohol into sodium ethylate transforms it from an irritant to a caustic. Laid on dry parts of the body the sodium ethylate is comparatively inert, but so soon as the part to which the substance is applied gives up a little water, caustic soda is formed in proportion as water is eliminated by the skin. Potassium ethylate is prepared in a similar way, but its action on animal tissues is more energetic than the sodium compound. For the treatment of the ordinary raised circumscribed nævus the application of ethylate of sodium may be termed a specific. In respect to the smooth, diffused nævus, commonly called 'mother's mark' or 'port-wine stain,' success is not always complete, and in some cases a very troublesome cheloid is the result. RICHARD NEALE, M.D.

1098. *Leloir on Alopecia.*—M. Leloir has treated 142 cases of this kind, ninety-two of which he was enabled to observe throughout. He divides the patients into three categories. 1. Neurotrophic alopecia. This group comprises the cases in which no source of contamination has been found, but there were well-marked nervous phenomena, the connection of which with the alopecia was obvious. This form of alopecia occurred in persons of a nervous temperament, and sensory troubles were experienced on the site of the affected patches. The exciting causes were :—over-pressure at school, mental trouble, disappointments, or injuries to the scalp. 2. In this group he places the patients in whom neither contagion nor nervous affection could be incriminated. 3. This group comprises cases in which the contagion was indisputable. He never, however, in any case, succeeded in finding a parasite, and he was never able to communicate the disease to animals by inoculation. He concludes that certain forms of alopecia are contagious, and others are due to neurotrophic effects. He is of opinion that patients belonging to the latter class need not be forbidden to attend school.

1099. *Lemoine on the Treatment of Epithelioma by Chlorate of Potassium.*—The author calls attention to a method of treatment of epitheliomata of the skin advocated last year by M. Reclus, but allowed to fall into neglect. It consists in the use of chlorate of potassium internally and externally in cases where surgical interference is impossible, or where the patient refuses to submit to it. He quotes two cases in which cicatrisation followed the use of the drug internally in doses of half a drachm daily, the ulcerated surface being kept covered by lint moistened with a solution of the salt. He urges that the treatment is simple and well worthy of a trial.

1100. *Treatment of Erysipelas by the Local Application of Antiseptics.*—℞ iodoform, 1 part ; collodium flexile, 20 parts ; to be painted frequently over the affected area. Another formula is :—Hydrarg. perchlor., 1 part, in 20 parts of collodium. Rothe suggests the following :—℞ acid. carbolici, spirit. vini rect., tinct. iodi, āā 3 parts ; ess. terebinth., 6 parts ; glycerine, 9 parts. Whichever formula be selected it is desirable to paint, not only the diseased area, but the parts immediately adjacent.

1101. *Bertolus on the Use of Carbolic Acid in Affections of the Skin.*—As the result of a series of observations the author arrives at the following conclusions :—1. That carbolic acid is an excellent remedy in Hebra's prurigo ; 2. It is of benefit in eczemas, not accompanied by much weeping and of a lichenoid character ; 3. It appears to act on the nerve terminals. It is useless to exceed the daily dose of 5 to 10 grains in children, and 8 to 12 grains in adults. ALFRED S. GUBB.

LARYNGOLOGY AND RHINOLOGY.

RECENT PAPERS.

1102. THOM, ALEXANDER.—Tracheotomy in Children, why Unsuccessful? (*Edin. Med. Jour.*, September 1888.)

1103. DACRE, JOHN. — Intubation of the Larynx. (*Bristol Med. Chir. Jour.*, June 1888.)

1104. SAUNDERS, A. R.—Rhinolith. (*Proceedings of the General Meeting of the Jamaica Branch of the Brit. Med. Assoc.*, July 25, 1888.)

1105. COUPARD, DR.—Foreign Body in the Nasal Fossa. (Extract from the *Jour. de Méd. de Paris*, 1888.)

1106. GRADLE, H.—On Headaches from Overlooked Causes in the Nasopharynx and Ears. (*Jour. of the Amer. Med. Assoc.*, Sept. 8, 1888.)

1107. MASON, E. C. — Malignant Tumour of the Thyroid. (*The Brooklyn Med. Jour.*, March 1888.)

1108. LEWIS, E. A.—A Question Regarding Tracheotomy. (*Ibid.*)

ART. 1102. *Thom on Tracheotomy in Children.*—Dr. Alexander Thom (*Edin. Med. Jour.*, September 1888) reports seven cases in which he performed tracheotomy in children as a last resource for laryngeal obstruction, due to croup or diphtheria, and although the immediate result was entirely satisfactory in every single instance, the disease was fatal. In some cases the author thinks this attributable to undue delay at the parents' wish, in others to imperfect after-treatment, such as necessarily occurs in country practice. Complications may have rendered some of the cases unsuitable for operation also. In spite of this he is led to conclude that, so long as the early treatment of croup continues in such an unsatisfactory condition, the operation of tracheotomy ought to have a place in our routine practice, if not as curative, at least as capable of relieving a very distressing condition—namely, immediate death from suffocation.

1103. *Dacre on Intubation of the Larynx.*—Mr. John Dacre (*Bristol Med. Chir. Journal*, June

1888) gives a short *résumé* of this subject, but no original observations.

1104. *Saunders on a Case of Rhinolith.*—Dr. A. R. Saunders (*Proceedings of the General Meeting of the Jamaica Branch of the British Med. Association*, July 25, 1888) gives the sequel of a case of large rhinolith, mentioned by Sir Morell Mackenzie in his work on *Diseases of the Throat and Nose*, vol. ii., p. 446. Sir Morell Mackenzie, after having on a previous occasion divided the stone (which extended from the inferior turbinated body to the roof of the nose) with bone forceps, fixed it with a plug of lint drawn into the posterior nares by means of a string, and seized and crushed it with a lithotrite. Seventy grains weight of stone were thus removed. The patient, after passing through an attack of rather extensive facial cellulitis, had to return to Jamaica, his leave of absence having expired, but 'unfortunately a small fragment of the stone remained in the extreme upper part of the nose,' which, in Sir Morell Mackenzie's opinion, was very likely to become enlarged by further accretion. A few weeks after his return the patient consulted Dr. Saunders for the first time about his nose. On examination, the nostril was entirely blocked by the calculus which lay embedded in a kind of hollow, which it had formed for itself in the floor of the nostril. Under chloroform, after raising the stone with the elevator, the lower blade of a strong pair of necrosis forceps was introduced beneath it, and it was steadied and pushed forward by means of a finger introduced into the posterior nares. Without much difficulty the stone was crushed and fragments were removed to the extent of 155 grains. The patient recovered rapidly and there has been no recurrence.

1105. *Coupard on a Foreign Body in the Nose.*—Dr. Coupard (extract from *Jour. de Méd. de Paris*, 1888) relates the case of a girl, aged 6½ years, from whose nostril he removed, with forceps, a button, which had remained there for five years. In addition to fœtid discharge, the child suffered from bronchitis, loss of spirits, and somnolence during meals. The relief to these symptoms was immediate.

1106. *Gradle on Headaches from Overlooked Causes in the Nasopharynx and Ears.*—Dr. H. Gradle (*Jour. of the American Med. Assoc.*, Sept. 8, 1888) describes four forms of this affection. 1. Diffuse pain throughout the head, lasting from one to three or five days, with or without malaise, bone ache, and slight rise of temperature, associated with circumscribed follicular tonsillitis, or rather follicular angina, for the lesion may be either in the tonsil, or in a lymphatic follicle of the pharynx, or in the pharyngeal tonsil or its lateral expansions. Treatment: brushing with strong solution of nitrate of silver. 2. A dull occipital headache, lasting only perhaps some hours or days, but frequently returning, caused by adenoid vegetations. Treatment: removal of the growths. 3. Headache due to hypertrophy of the nasal mucous membrane, especially that over the middle turbinated bones. This form always occurs in individuals either of a neurotic type or in those run down in health from overwork or worry. Catarrhal symptoms are not always present. Treatment: spraying the nasal cavities with nitrate of silver solution and removal of any polypoid mucous membrane with hot or cold snare. 4. Almost continuous headache in children dependent on diminished patency of the Eustachian tubes. When the hearing is not much impaired, a child may suffer from a feeling of fulness in the ears, without ever complaining of its ears. Treatment: inflation and attention to the nasopharynx.

1107. *Mason on Malignant Tumour of the Thyroid.*—Dr. E. C. Mason (*Brooklyn Med. Jour.*, March 1888) reports a case in which Dr. Rockwell attempted to remove a round-celled sarcoma of the thyroid in a woman aged 55. It had begun to grow as a bronchocele, and had reached the size of a child's head. The tumour extended from a line corresponding to the external auditory meatus on the right to a line corresponding to the angle of the lower jaw on the left, and involved the whole length of the neck. Breathing was difficult. No laryngoscopic examination was made. It was intended to perform Kocher's operation. The internal carotid was tied, amongst other vessels. The lower portion of the mass was free to come away, but the base remained immovable, and there were prolongations between the tumour (? trachea—*Rep.*) and œsophagus, and œsophagus and vertebræ. A ligature round the base could not be drawn sufficiently tight to control the circulation through the tumour. The operation had therefore to be abandoned, and, in spite of transfusion, the patient died an hour after. *Post mortem* examination showed the whole length of the common carotid artery, all the other important vessels on the right side of the neck, and the trachea included in the mass of tissue composing the growth. Dr. Rockwell states that suffocative symptoms were rapidly developing, and tracheotomy or intubation was impossible. The operation was only undertaken at the patient's urgent request, even if she should die on the table.

1108. *Lewis on Tracheotomy in Croup and Diphtheria.*—Dr. E. A. Lewis, before a meeting of the Brooklyn Surgical Society (*Brooklyn Med. Jour.*, March 1888), raises the question how far we shall go in advising or urging the operation of tracheotomy in obstruction due to croup or diphtheria. He was formerly in the habit of urging the operation, but now, for some years, has offered it to the friends of the patient, but left the choice to them, and has only done it at their distinct request. Since he has ceased to urge the operation he thinks the percentage of recovery in apparently hopeless cases has been greater than before. He has seen at least two desperate cases recover under the lime and bichloride treatment.

E. CRESSWELL BABER, M.B.

THE annual course of the Brown Institution lectures (open to the public) will be delivered by Mr. Victor Horsley, at the University of London, on Nov. 28 and 30, and Dec. 3, 5, and 7, at 5 P.M., on the subject of 'Epilepsy.'

ON Sept. 29, 1888, the first number of a new paper was published, entitled the *Illustrated Medical News*, which is intended to fill a void in the pictorial representation of clinical and pathological work, so that cases can be recorded, and excellent engravings kept for reference in the future. The lithographs and woodcuts are of a superior style, and many leading members of the profession have already contributed some excellent articles.

METHOD OF APPLYING HOT MOIST FOMENTATIONS.—Dr. Thos. Britton, of Harrogate, writes to the *Lancet* that he is indebted to the ingenuity of a lady patient for the following simple but effective mode of applying hot moist fomentations. She puts a square yard of flannel into one of the patent potato squeezers, pours boiling water upon it, and squeezes it; and this is done so effectually that the bedclothes, &c., are not made wet and uncomfortable by the application of the flannel, as they are when it is simply wrung out by the hands.

REVIEWS.

ARTICLE 1109.

Die Krankheit Kaiser Friedrich des Dritten dargestellt nach amtlichen Quellen und den im Königlichen Hausministerium niedergelegten Berichten der Aerzte. Professor BARDELEBEN, Generalarzt I. Kl. und Kgl. Geh. Ober. Med. Rath in Berlin; Professor VON BERGMANN, Generalarzt I. Kl. und Geh. Med. Rath in Berlin; Dr. BRAMANN, erster Assistent der Kgl. chirurg. Klinik in Berlin; Professor GERHARDT, Geh. Med. Rath in Berlin; Professor KUSSMAUL, Geheimer Rath in Strassburg i. E.; Dr. LANDGRAF, Stabsarzt in Berlin; Dr. MORITZ SCHMIDT, Sanitätsrath in Frankfurt a. M.; Professor SCHRÖTTER, Vorstand der laryngol. Klinik in Wien; Professor TOBOLD, Geh. Sanitätsrath in Berlin; Professor WALDEYER, Geh. Med. Rath in Berlin. Kaiserl. Reichsdruckerei. Berlin.

The Illness of the Emperor Frederick the Third, &c., &c. Berlin. 1888. R. von Decker's Publishing House. G. Schenck, Royal Publisher. [An English translation of the above.]

The Fatal Illness of Frederick the Noble. By Sir MORELL MACKENZIE. London. 1888. Sampson Low, Marston, Searle, & Rivington.

IN these two publications, the history of the last illness of the late Emperor Frederick, which was watched with such painful interest by the whole civilised world, is related from widely different points of view. The German pamphlet consists of separate reports by ten of the physicians who were directly connected with the case, and Professor von Bergmann is understood to have acted as general editor. The names of several of the German doctors who were also at one time or another in attendance on the late Emperor—viz., Drs. von Lauer, von Wegner, and Schrader, and Professors Virchow, Leyden, Senator, and Krause are absent from the title-page. The pamphlet, which purports to be drawn from 'official sources,' and which is issued from the Imperial Press at Berlin, is an elaborate defence of the position taken up by Professors Gerhardt and Von Bergmann at a very early period. Sir Morell Mackenzie's conduct throughout the case is very severely criticised on ethical as well as scientific grounds.

The work opens with an account of the early stages of the Emperor's illness by Professor Gerhardt, who was the first to make a laryngoscopic examination in the case. The patient had been hoarse since January 1887, without any other symptom of laryngeal catarrh. On March 6 Dr. Gerhardt discovered an uneven growth about 4 millimètres in length by 2 in depth on the edge of the left vocal cord somewhat behind the *processus vocalis*. The movement of the cord was at that time perfectly free. A diagnosis of 'polypoid thickening' was made, and after some ineffectual attempts to remove it with the snare and the ring-knife, electric cautery was applied. This was done on March 14, 16, 26, 27, 29, 30, 31, April 1, 2, 3, 4, 5, 6, and 7; on the 8th there was nothing left of the growth and the patient considered himself cured. On May 15, Professor Gerhardt found that the growth had returned, and the mobility of the left cord was decidedly impaired. He came to the conclusion that the case was one of cancer for the following reasons:—1. The rapid recurrence of the growth. 2. Its hardness and unevenness. 3. The absence of healing in the cautery wound. 4. The deficient mobility of the cord. 5. The absolute exclusion of tuberculosis or other infective disease. 6. Certain confirmatory circumstances, such as the age of the patient, the situation and appearance of the growth, &c. This diagnosis was endorsed by Professors Tobold and Von Bergmann, and it was decided that the larynx should be divided and the tumour extirpated, there being 'no possibility of removing through the mouth a growth which was so flat and largely adherent to the vocal cord over such an area and without any visible edge, in fact a growth that appeared to project from the interior of the swollen cord' (p. 8). Before proceeding to operate, it was agreed to call in Dr. Morell Mackenzie, who examined the patient on May 20, and said that the tumour did not look malignant. He recommended that a piece of the growth should be removed through the mouth, so that its microscopic character might be determined. He accordingly extracted a small portion of tissue, which Professor Virchow pronounced to show only inflammatory changes. Professor Gerhardt alleges that in attempting to remove a second piece Dr. Mackenzie injured the right, *i.e.* the unaffected, vocal cord. On the English physician's undertaking to restore the voice completely by removing or destroying the whole of the growth through the mouth, the German doctors consented to allow him to try this plan of treatment on the following conditions:—1. That all pieces of the growth removed should be sent to Professor Virchow. 2. That the treatment in England should be conducted under the eyes of a German physician skilful in laryngoscopy; that the treatment should be abandoned if the growth continued to increase in size, or if it should prove to be malignant 'either by microscopic examination of a portion or otherwise.' Dr. Landgraf, one of Professor Gerhardt's assistants, accompanied the illustrious patient to England.

Professor von Bergmann refers to seven cases in which he had successfully performed thyrotomy at Berlin, and argues that nowadays with antiseptics the risk of that operation is slight. No other procedure was thought of in the case of the Emperor Frederick in May 1887, although it was stated in many quarters that it was proposed to excise the larynx at that time. The illustrious patient himself said that 'the tumour must be removed in any case, and if it were not possible to remove it from the inside, then an incision must be made from the outside' (p. 21). Professor von Bergmann proceeds to show that no reliance can be placed on negative results of microscopic examination in such cases, adding that it was for this reason that Professors Gerhardt and Tobold had not attempted to remove a portion of the growth through the mouth.

Dr. Landgraf's report relates to the period between the middle of June and the end of August. He states that when he first examined the patient (June 17) a wound was distinctly visible on the surface of the right vocal cord; the action of the left cord was defective, and there was thickening of the posterior wall of the larynx internally. Dr. Mackenzie, according to Dr. Landgraf, failed to notice any of these points till some weeks later. The tumour, although destroyed, recurred and continued to increase in size. Dr. Landgraf urged that a consultation should be called, but was not listened to; it was also in vain that he suggested

that 'if it were considered necessary to remove a portion of the tumour for the purpose of a further microscopic examination it should be done now (August 29), as the tumour was at present of such a size as to make it easy to pinch a piece off' (p. 34). On that same day a bulletin was drawn up by Dr. Mackenzie in which it was denied that there was any increase in the growth, and no mention was made of the fact that the patient was still hoarse till Dr. Wegner insisted on making an addition to that effect.

No attention seems to have been paid to Dr. Landgraf's statements, and the case was represented as running a most favourable course. In the beginning of November, however, the symptoms became so alarming that a grand consultation was held at San Remo, in which Professor Schrötter of Vienna, Dr. Krause of Berlin, Dr. Moritz Schmidt of Frankfort, and Dr. Mackenzie took part. The following protocol was signed by these gentlemen, and by Dr. Schrader and Mr. T. M. Hovell, on November 11 :

'After repeated and most careful examination the assembled physicians have satisfied themselves that his Imperial Highness is suffering from cancer of the larynx. The different modes of treatment possible were also discussed in every detail, his Imperial Highness informed of the same, and a decision was arrived at to perform tracheotomy low down when it might become necessary' (p. 46).

The illustrious patient declined to submit to any surgical procedure except tracheotomy.

On Nov. 18 a protocol was by command of the Emperor William drawn up at Berlin by Professors von Bergmann, Gerhardt, and Tobold, and Drs. Wegner, Leuthold, M. Schmidt, and Landgraf, setting forth that the blame of having postponed till it was too late an operation which should have been performed at a much earlier period, was solely attributable to Dr. Mackenzie, who had overlooked the development of the disease, even when pointed out to him by Dr. Landgraf.

Between November 1887 and February 1888 Dr. Bramann, who was at San Remo in case tracheotomy might suddenly be required, reports that the disease steadily gained ground. He was allowed to see the patient only at irregular intervals, but on each occasion the air-passage was narrower than before. The right cord lost its mobility, the voice became almost inaudible, and there was increasing difficulty of breathing. Dr. Bramann wished to summon Professor von Bergmann, but this was not permitted, and on Feb. 9 he was compelled to perform tracheotomy himself.

Professor von Bergmann relates the course of events for some time after the operation. At first all went well ; then the coughing became more frequent, and the expectoration was tinged with blood. Dr. Mackenzie asserted that this was due to the cannula rubbing against the back wall of the trachea, whilst Dr. von Bergmann maintained that it was caused by disintegration of the cancerous mass in the larynx. Dr. Mackenzie refused to accept this explanation on the ground that the disease had never been proved by microscopic examination to be malignant. On Feb. 15, however, Dr. von Bergmann found in the expectoration 'besides pus and blood-corpuscles, numerous globular bodies containing evidently epithelial cells in concentric layers in addition to conical formations consisting of closely packed large pavement epithelial cells. In some preparations there were to be found besides many elastic filaments' (p. 67). Dr. Krause accepted this as proof of cancer, and Professor Kussmaul soon afterwards confirmed it, but Dr. Mackenzie would only take the opinion of a professed pathologist on such a matter. Professor Waldeyer was therefore summoned from Berlin, and, after several careful examinations, pronounced the disease to be malignant. His report contains a full statement of the methods employed and the facts on which his opinion was based. Dr. von Bergmann goes on to say :—'As the august patient had been assured so frequently that the physicians had made a mistake on Nov. 9, and that the only existing disease was one of the larynx, curable by tracheotomy, I now proposed to keep the tenor of Professor Waldeyer's opinion a secret, and Dr. Mackenzie thanked me for it' (p. 81).

Meanwhile the disease made steady progress, and in the middle of April a difficulty occurred with the cannula. Professor von Bergmann was summoned, and found the Emperor almost suffocating. After some trouble a new tube was inserted by Dr. Bramann, whilst Dr. von Bergmann held apart the edges of the tracheal incision. He affirms that the difficulty was caused by cancerous excrescences blocking up the passage into the windpipe, and that it was necessary for him to make way for the cannula by removing the obstructing fungosities with his finger. The Emperor had been feverish and unwell ever since April 6, and on the 13th (the day after the incident just referred to) Dr. Mackenzie, in opposition to the advice of Professor von Bergmann, allowed him to drive into Berlin. This was followed by an exacerbation of the febrile symptoms, which Dr. Mackenzie contended were due to peritracheitis caused by Dr. von Bergmann's efforts to introduce the cannula, whilst the latter maintained that they were caused by putrid bronchitis set up by the discharge from the cancerous ulcers in the larynx. The relations between the German surgeon and the English specialist soon afterwards became so strained that the former withdrew from the case on April 25.

Professor Bardeleben carries on the narrative up to the time of the Emperor's death. His report consists merely of brief notes of the illustrious patient's condition from day to day, and contains nothing of a controversial character.

The pamphlet concludes with the text of the official protocol of the autopsy, which was made by Professors Virchow and Waldeyer, in the presence of Count Stolberg-Wernigerode, Sir Morell Mackenzie, Mr. Hovell, Professors Bardeleben and von Bergmann, and Drs. Wegner, Leuthold, and Bramann, whose signatures are appended to the document.

The following is a summary of the charges made against Sir Morell Mackenzie by the authors of the German pamphlet :—1. That he made a vital error in diagnosis, which prevented an operation being done whilst there was yet time. 2. That he tried to throw the responsibility for this mistake on Professor Virchow. 3 That he showed carelessness in examination, and want of skill in manipulation to such a degree as to have removed a portion of the healthy vocal cord. 4. That he either failed to see that the disease was extending, or deliberately violated one of the conditions on which the case had been handed over to him—viz., that he would call a consultation if the growth increased in size. 5. That

he prevented Drs. Landgraf and Bramann, as far as possible, from examining the patient. 6. That he attributed symptoms due to the disease to the instruments and manipulations of some of his German colleagues, thereby damaging their professional reputation in the eyes of the patient and the public.

The German pamphlet, which is obviously designed solely for medical readers, has no pretension to literary style, and its arrangement is somewhat chaotic. Though written with a good deal of personal animus, it is nevertheless an instructive scientific document.

Sir Morell Mackenzie's reply is nominally divided into three parts—historical, controversial, and statistical—but the controversial element is largely preponderant throughout. He states that, before his arrival, no one had thought of extracting a portion of the growth for microscopic examination, and that, when he proposed this measure, Professor Gerhardt replied that he could not use forceps, and Professor Tobold that he no longer operated. He denies that he injured the right vocal cord, and accuses Professor Gerhardt of having trumped up this charge against him in order to discredit him in the eyes of the patient. With regard to the question of diagnosis, he says (p. 29), 'I gave no opinion one way or the other as to the nature of the disease. I did not say that it was not cancer; I only said that that opinion was "not proven," and, in the absence of positive proof, I refused to sanction surgical procedures which at present are, at the best, more or less of the nature of experiments, which are always dangerous to life, nearly always destructive to the voice, and which, even when "successful," too often leave the patient unfit for the business of life, and even sometimes in a condition worse than death itself. Till the nature of the case should be clearly proved, it seemed to me to be my duty, not merely as a physician, but as a man, to oppose the application of a remedy which the patient might justly think worse than the disease.'

Sir Morell Mackenzie gives Professor Virchow's various reports in full, and points out that they were so encouraging that in the face of them 'no doctor would have thought for a moment of submitting to a serious operation if the case had been his own' (p. 36). He adds that whatever responsibility he incurred in recommending the course that was adopted, his colleagues fully shared by acquiescing in it. He maintains that the conditions on which it was agreed to hand the case over to him were rigidly adhered to by him, saying:—'The final portion of growth which I removed was submitted to Virchow, and when in November my treatment proved unavailing I invited two eminent laryngoscopists to meet me in consultation to decide what further steps should be taken' (p. 36). Dr. Landgraf's report is simply dismissed as erroneous from beginning to end. Sir Morell Mackenzie affirms that this physician was utterly incompetent as a laryngoscopic observer, and that the patient was more than once inclined to dispense with his services on that account. He maintains that he succeeded in entirely destroying the growth, and in so far restoring the patient's voice that in August 'the Queen expressed to Mr. Hovell the pleasure she felt at hearing the Crown Prince speak once more in his own voice' (p. 54). Sir Morell states that in July 'a slight swelling was noticed on the posterior surface of the arytenoid cartilages' outside the larynx; this, in his opinion, 'indicated inflammation of the perichondrium, if not disease of the cartilages themselves' (p. 52). The tumour which Sir Morell had destroyed never recurred, and the interior of the larynx remained free from any new formation till October, when a fresh growth appeared in an altogether different situation—viz., some way below the left vocal cord. This, according to Sir Morell Mackenzie, had 'a distinctly malignant look;' and in the protocol, which at the consultation with Professor Schrötter and Dr. Krause he drew up, he stated that in his opinion 'the disease was cancer; pointing out, however, that in the absence of microscopic evidence such a diagnosis could not be made with certainty' (p. 69). The account given by Sir Morell Mackenzie of the progress of the case between November 1887 and February 1888 differs materially from that furnished by Dr. Bramann. The latter's statements are put aside as cavalierly as those of Dr. Landgraf, and Sir Morell Mackenzie quotes the daily notes made by Dr. Krause and Mr. Hovell, as well as his own observations on the occasion of his different visits to San Remo. These represent the disease as alternately advancing and receding in a very perplexing way; swellings appeared and vanished, ulcerated surfaces healed, and the general health continued so good that the illustrious patient jocularly apologised for feeling so well. Hopes were entertained that the symptoms might after all be due to nothing worse than 'chronic interstitial inflammation of the larynx combined with perichondritis' (p. 98).

After the performance of tracheotomy the case, according to Sir Morell Mackenzie, entered on a much more unfavourable phase. This in his opinion was due to the fact that the German surgeons persisted in using tubes of unsuitable size and shape, which chafed the inside of the trachea, and caused continual coughing and frequent bleeding. This, together with want of sleep, brought the patient's strength to a low ebb, and when the case was restored to Sir Morell Mackenzie on March 16, he was a 'confirmed invalid.' 'Besides this,' the author goes on to say, 'the disease in the larynx, which had previously been progressing very slowly, had, through the coughing caused by ill-fitting tracheotomy tubes, been stirred into extreme activity. Greater destruction was probably occasioned in three weeks in this way than would have occurred in a year had the illustrious patient not been subjected to such injudicious treatment' (p. 122).

Sir Morell Mackenzie's account of the difficulty with the cannula on April 12 is altogether different from that given by Professor von Bergmann. According to the English physician, the Professor was sent for merely as a matter of courtesy; it was desirable to change the tube, but there was so little urgency that when the doctors entered the Emperor's room they found him 'engaged in writing' (p. 146). Professor von Bergmann, who was 'in a state of great excitement' (p. 146), seized a cannula and attempted to introduce it. Three times he 'plunged his sharp-edged cannula into the tissues of the neck in front of the trachea' (p. 213) causing 'most distressing coughing and copious bleeding' (p. 147). Professor von Bergmann also, to Sir Morell's 'consternation,' 'pushed his finger deeply into the wound,' but all to no purpose, and he had finally to send for his assistant, who, 'taking a moderate-sized cannula (No. 8 German measure), passed it with the greatest ease into the trachea' (p. 147). The 'false passage' which, according to Sir Morell Mackenzie, was made on this occasion by Professor von Bergmann, is said

by the English physician to have shortened the Emperor's life by nearly a year. He says (p. 215): 'It can be proved that there was no bleeding whatever before Bergmann's arrival. It can also be proved that his forcible attempts to introduce the tube were followed by profuse hæmorrhage, the blood running out of the wound in the neck and also down the windpipe, and causing violent coughing. Three days afterwards the Emperor had a shivering fit. A day or two later still, an abscess is noticed in the tissues into which von Bergmann thrust his cannula. The abscess extends downwards, ounces of pus are secreted daily, the patient is harassed by constant coughing from the pus finding its way into the windpipe, and his strength is reduced by the profuse and continual discharge of matter. At last he sinks and an immense abscess-cavity is found after death just in the place where Bergmann made the false passage! The logic of these facts is irresistible.' Since the publication of Sir Morell Mackenzie's book, Professors Virchow and Waldeyer have formally denied that their protocol of the autopsy affords any ground for this statement; Sir Morell, however, adheres to it, and his statement is confirmed by Mr. Hovell.

While the authors of the German pamphlet maintain that the disease was cancer from the first, Sir Morell Mackenzie apparently believes that the growths which developed in the autumn were different in nature as well as in situation from the original tumour which he claims to have destroyed. According to this view, the Emperor suffered from two distinct diseases—a benign growth *on* the vocal cord, which was completely cured, and a malignant growth *below* the cord, which ultimately caused the patient's death. He contends that the grave aspect which the case suddenly assumed may possibly have been caused by Professor Gerhardt's 'unmerciful use of the galvano-cautery' (p. 43), which, he says, is unparalleled in medical literature. He sums up his argument in the following words:—'If the growth was benign in the first instance, there is, in my opinion, only too much reason to think that Gerhardt's burnings must be held answerable for its subsequent transformation into cancer; if it was malignant from the first, the disease was undoubtedly aggravated by the treatment' (p. 44).

In the statistical part of his work, Sir Morell Mackenzie gives tables of the results of thyrotomy, and partial and complete excision of the larynx, for cancer. The figures adduced give a very gloomy view of the patient's prospects after all these operations, both from the immediate risk to life which they involve, and perhaps even more from the rapid recurrence of the disease in the successful cases. As Professor Gerhardt points out, however (*Die Krankheit Kaiser Friedrich des Dritten*, p. 8), 'no statistics can convey the full probability of a permanently good result which there was in this case.'

Sir Morell Mackenzie's book is well illustrated, and is written in a popular style. He complains that in preparing his defence he has had several disadvantages to contend against, the chief of which are that he has been denied access to some important documents, while the official archives have been open to his opponents, and that his lips have been sealed with respect to matters which, 'though not bearing on the purely medical aspect of the case, were yet most important factors in determining the course which was pursued' (p. 5).

As to the merits of the controversy no opinion can be expressed here; the reader must form his own judgment from the abstracts given above, or from the original works, which will well repay perusal. *Both* should be studied, and they should be read in their logical order—that is to say, in the order of their publication.

ARTICLE 1110.

1. *The Thermal Baths of Bath: their History, Literature, Medical and Surgical Uses, &c.* By H. W. FREEMAN, F.R.C.S.I., M.R.C.S.E., &c. Crown 8vo., pp. 380. London: Hamilton, Adams, & Co. 1888.
2. *A Short Manual of the Bath Mineral Waters.* By A. E. W. FOX, M.B., F.R.C.P.E. Crown 8vo., pp. 88. London: Simpkin, Marshall, & Co. 1888.
3. *Die Kurorte und Heilquellen des Grossherzogthum Baden.* Von M. RHEINBOLDT, Apotheker. 12mo., pp. xlix.–123. Baden-Baden: E. Sommermeyer. 1888.
4. *Glengariff a Winter Health-Resort.* By D. EDGAR FLINN, F.R.C.S.I. 8vo., pp. 12. Dublin: J. Falconer. 1888.

1, 2. WHATEVER be the interest of archæological details, whether medical or local, to others, it is a question how far patients, or those who send them to baths, care to hear much about the past of the places they visit. Bath history appears to have a curious fascination for all writers. Of late years Dr. Spender gave us a pleasant sketch of it, and these two new works both devote considerable space to it.

Mr. Freeman's work, in particular, treats at great length on the subject. It devotes sixty-three pages to the pre-Roman, Roman, British, Anglo-Saxon, and Norman history of Bath. Nearly seventy pages are devoted to an account of the old physicians of the place; but why is Harrison's description of Bath introduced here, and why does the account of the doctors cease at the year 1710 or so?

The bibliographical list of works on Bath, which does not exceed fourteen pages, is useful and quite in place; but why do Dr. Sutherland's works appear under the name of his critic, Dr. Lucas?

If we turn now to other portions of the work, in a book on Bath who wants tables of the temperature of all the chief thermal waters of the world, or a chapter on American spas? The practical portion of the work is a reproduction of the late and last Dr. Falconer's excellent remarks on Bath waters, but it is so intermixed with the observations of the author that it is difficult to know how much belongs to Dr. Falconer and how much to Mr. Freeman.

Forty-four pages are devoted to an account of massage. There is some excuse for this at a time when the Aix methods have been brought forward so prominently in the treatment at Bath, or, as Mr. Freeman rather obscurely expresses himself, 'since, to Aix-les-Bains are owing the principles contained in the new massage baths of Bath.' We observe various novel misprints, as apparati, and μασσειφ figures as an infinitive. We could offer much further criticism on this book and its arrangement; but, after all, it contains a quantity of useful information, has good illustrations, and is quite worthy of referring to, although there is more of it than is wanted.

Having offered these remarks on a book which

we think unnecessarily long, we turn to Dr. Fox's work, which appears to us to have the opposite fault of being too short. More than half the work is styled introductory, and consists of extracts from the works of the earliest writers on Bath waters. They are curious and interesting, but we doubt whether ordinary people, whether professional or unprofessional, will care for them.

When we come to Dr. Fox's own remarks on treatment, we find that they are always cautious and discriminating. We only think that they are too brief, and, although we agree with him that positive rules laid down on paper cannot be adhered to, as treatment must vary according as circumstances may arise, we should have been obliged to him if he had given us more of his own experience. Both these books are gratifying instances of the revived interest in the only really thermal waters of Great Britain. Both authors allude to the possible revived use of the waters in biliary and renal calculi, to their former use in which attention was called by the present writer. After all, it was not the Bath but the Bristol waters that were the last resort in urinary calculi and diabetes, like Contrexéville and Vittel of to-day!

3. This unpretending little book is an excellent guide to the medical resources of the duchy of Baden, which are varied.

Among salt waters there are the well-known weak thermal ones of Baden-Baden, and the excellent Rheinfeld strong baths near Basle. These are among the most comfortable of their class.

Baden is making great steps in adding to its resources all the subsidiary modes of treatment now in use. In the way of actual additions to the buildings a large new hospital for the poor is under construction. An institution for the treatment of nervous complaints is also rising on high ground. Massage practice and Swedish gymnastics, electricity, and the Oertel cure are in full swing here.

In the way of iron waters, Baden has the whole very important Kniebis group—from the highest Rippoldsau, with most comfortable arrangements, down to Petersthal, all having springs with plenty of iron and carbonic acid, and most of them a certain amount of aperient action. When the weather is fine they are all very agreeable places of residence.

The number of summer resorts in the Black Forest is legion, such as Allerheiligen, Triberg, Titi See, Schluch See, &c., and the opener and more bracing Freudenstadt (across the Wurtemberg frontier); they are all pleasant on the one condition, *i.e.* of the weather not being wet. Under the same category come similar places, such as the Drei Aehren, across the Rhine, among the Vosges mountains, very lovely, with fine views into the plains.

These places are not Switzerland, but they have a great charm peculiar to themselves.

The Germans have of late years been advancing claims to some winter resorts of their own, and the chief of these are in Baden. Baden-Baden, if the house is on the side of the hills and not too low, is not a bad winter residence. Freiburg has grown in popularity; it is opener and more bracing than Baden.

Badenweiler, with its Buxton-like water, and 1,200 feet above the sea, is said to have a mild, calm winter. It has been growing in repute in cases of asthma and laryngeal affections. Indeed, Dr. Kollman has established a sanatorium for the treatment of the latter.

St. Blasien, in the south of the Black Forest, at an elevation of 2,100 feet, situated among deep forests, has of late years been open to the reception of guests during the winter as well as during the summer, and seems to grow in favour.

4. Glengariff is a place of great beauty, with two excellent hotels. The temperature is mild, but there is a heavy rainfall. We want separate tables of the mean temperature of the winter and spring months, also of the season of rain. There is no doubt that Glengariff is in spring suitable for many chest affections. The great drawback is want of amusement. Under a free expenditure of money, the place might be much developed. J. Macpherson, M.D.

Article iiii.

The History and Circumstances of a Peculiar Outbreak of Febrile Disease in St. Mary's Roman Catholic Industrial School for Boys, Glasgow, March 1888. By James B. Russell, M.D., LL.D., Medical Officer of Health for Glasgow. *With Note on the Clinical Aspect of the Disease.* By Samson Gemmell, M.D., Professor of Practice of Medicine, Anderson's College, Glasgow. Robert Anderson, 22 Ann Street, Glasgow.

A full account is given in this pamphlet of the outbreak which occurred in March last in the Glasgow Roman Catholic schools. The inmates of these schools are taken from the waifs and strays of the city, and are consequently weak in constitution and of low vitality. At the time of the outbreak they numbered 207 boys and 194 girls, of which 66 boys and 2 girls were attacked.

Although it would be difficult to give the disease a distinctive name, there can be no doubt that, regarded both clinically and pathologically, it bore much resemblance to the specific infectious fevers. The invasion was sudden, violent headache, sickness, and high fever being present in every case, but there does not appear to have been any special eruption. There was a distinct tendency to pulmonary implication, cough being an almost invariable symptom. The average duration of the fever was seven days, ending in a crisis, from which recovery was rapid and complete. The first four cases ended fatally, three of them after a few hours' illness, and, as Professor Gemmell points out in his Note, this finds its closest analogue in the most severe—the so-called malignant—forms of epidemic disease. *Post mortem* examination showed conditions which accorded with the idea of acute specific poisoning, though it revealed no specific lesion, nor were any micro-organisms discovered. Pneumonia was present in about one-fourth of the cases attacked, and this gave rise to the suggestion that the disease might be 'epidemic' or 'infectious' pneumonia, but Dr. Gemmell is of opinion that the clinical features of the pneumonic cases did not lend support to this view, and inclines to the idea that, apart from their epidemic associations, the cases exhibited most of the characteristics of the typical acute form of that disease.

In investigating the etiology of the disease, Dr. Russell was able to exclude both food and milk as possible causes, and there appears to have been no coincident disease of a similar type in the neighbourhood. The schools are, however, situated in a thickly populated part of the city, near an overcrowded graveyard, the drainage was at the time defective, the accommodation, especially on the

boys' side, insufficient, and consequently the cubic space allowed to the inmates quite inadequate. Bearing in mind the natural constitutional delicacy of the children and their unwholesome surroundings, we are not surprised to read that the health record of the Institution is bad, that the invasion of infectious disease, especially typhus, has been frequent, that lung diseases are chonically prevalent, and that the death-rate is higher than that of the worst districts of Glasgow for the same ages. We concur with Dr. Russell in the opinion that the only radical cure for this melancholy state of things is to be found in the removal of the Institution to the suburbs, but, failing this, much could be done by reducing the number of inmates so that each could have an adequate amount of air space, and by remedying other defects in the internal arrangements in accordance with the suggestions made by Dr. Russell.

Appended to the report are short accounts of apparently similar outbreaks in other institutions of the same kind. Dr. Russell draws attention to the fact that in all of these, the observers were unable to assign the disease a place in nosology, and in all it was associated with defective sanitary conditions.

ARTICLE 1112.

Ætiology, Pathology, and Treatment of Puerperal Insanity. By A. CAMPBELL CLARK, M.D., Edinburgh. Reprinted from the *Journal of Mental Science*, July and October 1887, and January 1888.

DR. CAMPBELL CLARK, who has for the last seven years devoted much attention to puerperal insanity, gives us the result of a close study of forty cases. In treating of the etiology he thinks that the suppression of discharges occurring before the appearance of the disease must be taken as indicating a widespread neurosis of the visceral reflexes, and that only when arrest of milk and lochia take place before the insanity one can fairly rank such suppression as a cause. Nevertheless, the general impression produced by reading Dr. Clark's paper is that in puerperal insanity we have, in addition to the puerperal state, suppression or derangement of the secretions of the *primæ viæ*, kidneys and skin, which, acting upon an unstable neurotic temperament, are the exciting causes of the insanity. Dr. Donald Fraser has recorded in the *Glasgow Med. Jour.* (November 1885) a case where puerperal insanity was evidently the result of a septic condition of the blood following on metritis and phlebitis of the iliac veins. The malady ended in death on the ninth day after delivery and the third day after the maniacal explosion.

Passing over the much-debated point of albuminuria as a cause of puerperal insanity, Dr. Clark notices the frequent occurrence of a craving for drink as a symptom. He considers abuse of alcohol as distinctly producing precipitation of the disease, and that in septic absorption it intensifies the blood-poisoning more than any other agent. He notes an interesting form of hallucination occurring in one case of cerebral toxæmia in which the sound of a railway whistle was heard in one ear, and in the other ear that of a bell. In another case of a similar nature there was present the hallucination of hearing the sound of paddle-wheels in one ear and of bagpipe music in the other.

Dr. Victor Parant, in a paper on Puerperal Insanity, filling twenty pages of the July number of the *Annales Médico-Psychologiques*, states his high appreciation of Dr. Campbell Clark's observations, and especially places importance on his autopsies, showing a pathological condition of hyperæmia of the brain. In quoting his views at considerable length, Dr. Parant observes that even in cases where there is anæmia there may still exist a hyperæmic state of the brain. Dr. Parant points out that the value of Dr. Campbell Clark's remarks are increased by the fact of several of the autopsies having been made in cases in which the disease was still in its premordial type. In noting the abnormally small output of chlorides present in all cases Dr. Campbell Clark raises an interesting point by saying that the probable storing up of chlorides in the system in some unascertained way may have some pathological bearing on the disease.

Dr. Clark joins in the pretty general consensus of opinion against the use of opium except in the form of morphia suppositories to relieve peripheral irritations. Puerperal insanity has many complications which are often indicative of different means of treatment. He lays much stress on isolation, quiet and careful nursing in the early stages, and diet and exercise in the open air to complete recovery.

W. W. IRELAND, M.D.

ARTICLE 1113.

A Handbook of Surface Anatomy and Landmarks. By BERTRAM C. A. WINDLE, M.A., M.D. (Dub.), Professor of Anatomy in the Queen's College, Birmingham. London: H. K. Lewis. 1888.

DR. WINDLE states in his preface that this book is intended for anatomical students in their first and second years as a guide to that important portion of the knowledge of the human body which can be gained without the use of the scalpel and forceps. He admits that the facts contained in his *Handbook* have mostly appeared in different manuals, and observes that to these manuals it would be impossible to refer in detail, but he expresses his full acknowledgment to their authors whether their names are mentioned in the text or not. He might, perhaps, have made exception in the case of Mr. Holden's work. The expression '*Landmarks*' was a happy idea of Mr. Holden, and first appeared as the title of an article in the *St. Bartholomew's Hospital Reports*. That contribution was afterwards published as a separate work, as every anatomist must be aware.

The critic need not, however, draw any invidious comparisons, and Dr. Windle has maintained in the text the principles expressed in his preface. Indeed, he has taken care to attribute to Mr. Holden that anatomist's famous femoral line as well as his device for distinguishing the spinous processes of the vertebræ by rubbing the integuments over the vertebral column. Nor has Dr. Windle overlooked the valuable contributions to surface-anatomy made by Mr. Treves and Dr. Symington. Dr. R. W. Reid's method for determining the relation of the scalp to the lobes and fissures of the brain is included in the *Handbook*. Unlike Mr. Holden, Dr. Windle believes, to a limited extent, it is true, in diagrams, and ten illustrations adorn his work. The first four demonstrate the exit of nerves from foramina in the skull, the sutures, and the course of cerebral fissures and convolutions. These diagrams are decidedly useful. Fig. 7 deserves an honourable mention. It represents the anterior surface of the abdomen, with

the course and divisions of the abdominal aorta and the position of the external and internal abdominal rings.

The *Handbook* is well prepared, and cannot fail to prove instructive to Dr. Windle's pupils, whether they be those who actually work in Queen's College or those who, like the present critic, make themselves his pupils for the nonce by studying it. Every professor of anatomy who encourages the kind of work which forms the subject of the *Handbook* proves by so doing that he understands the true application of his science to the needs of medicine.

ALBAN DORAN.

ARTICLE 1114.

Hydrophobia: A Review of Pasteur's Treatment. By W. COLLIER, M.A., M.D., Cantab., M.R.C.P. Physician to the Radclyffe Infirmary, Oxford. Pp. 31. London: H. K. Lewis.

THE title of this pamphlet is doubly misleading. In the first place, it is a mere eulogy of Pasteur from beginning to end, by no means a 'review,' and, in the second, it is misleading to speak of Pasteur's 'treatment' of hydrophobia. That eminent experimenter does not profess to treat, and does not treat, hydrophobia; on the contrary, he declares that his method of inoculation is utterly powerless when hydrophobia has manifested itself. This work scarcely merits serious criticism. M. Pasteur himself must be surprised to learn that his method of examining silkworm moths has 'restored prosperity to a ruined trade.' The inoculations of cattle against splenic fever are spoken of as being attended 'with the best possible result.' Koch and others found them dangerous to animals and operators, only partially and temporarily protective, and practically valueless. As regards hydrophobia, a popular account of Pasteur's method of procedure is given, and in the last sentence of the work the opponents of the treatment are told that they must give some reasonable explanation of the fact that the later inoculations made by Pasteur on his patients do not kill them! Surely the *onus probandi* does not rest on the opponents of a theory. On p. 27 the English Government is said to have appointed a committee to inquire and report on the Pasteurian treatment. The expression should be 'the Local Government Board.' The severe silence with which the enthusiastic report of that committee was received by the medical profession for the most part, in this country at least, and the fact that very few patients have been sent to M. Pasteur from England during the past year, ought to indicate an attitude of neutrality, if not of distrust.

E. J. EDWARDES, M.D.

NOTES ON BOOKS.

ARTICLE 1115.

The Plea for the More General Adoption of Antiseptics in Midwifery Practice, by Dr. Cullingworth, is intended to bring home to practitioners the necessity for applying to obstetrical the principles which have proved so successful in surgical practice. No one who is familiar with the careless manner in which private midwifery practice is conducted will question the fact that there is great room for reform, and the time is possibly not far distant when disease directly attributable to the neglect of simple precautions will be regarded by the law as evidence of malpraxis, as it is already in many countries abroad. The author's favourite antiseptic agent is the 1 : 1,000 solution of corrosive sublimate, coloured with cochineal, and, for external use, this preparation probably leaves little to be desired.

ARTICLE 1116.

The 'B. P. C.' Unofficial Formulary for 1888, the second issue of which has now appeared, is a compilation the value of which no one can question. Its object is to facilitate the preparations of new drugs and new preparations, with a view to that uniformity which is indispensable if a proper estimate is to be formed of their therapeutical value. Sixteen new formulæ have been added to the list; one—the Emulsio olei morrhuæ—has been changed, and various minor alterations have been introduced. It is eminently desirable that prescribers should acquaint themselves with the contents of this work, both in their interest and that of the dispensing chemist.

ARTICLE 1117.

A MELANCHOLY token of the approaching *fin d'année* has reached us in *Letts's Medical Diary for* 1889 (Cassell & Co.). These diaries have become as indispensable to the medical man as his thermometer and stethoscope, and the amount of useful information crowded into these publications without adding appreciably to their bulk is indeed surprising. This particular diary is sufficiently well known to render more than the mere announcement unnecessary. The paper, though thin, is opaque and solid, and the space allotted is amply sufficient for ordinary requirements.

ARTICLE 1118.

Chemical Notes and Equations. By R. MILNE MURRAY, M.A., M.B.Edin. Third edition. Baillière, Tindall, & Cox. 1888.

THESE notes are well adapted for the purpose for which they have been compiled—namely, to act as a means of rapid reference, and to assist the memory of the candidate for examination.

The first part of the work, called by the author an 'Outline of Principles,' is especially valuable, being as it is a remarkably clearly written exposition of the fundamental principles of inorganic chemistry.

Although it is well known how difficult it is to avoid errors of the press in chemical works, still in a third edition, we should not have expected to find the error on p. 31, at line 25—namely, *ferrous* oxide for *ferric* oxide.

The portion of the work, which is called 'the Elements,' is little more than a string of chemical equations, but these are judiciously selected, and are such as would be most useful for the class of readers for whom the little work is intended.

G. STILLINGFLEET JOHNSON.

ARTICLE 1119.

Transactions of the Obstetrical Society of London. Part III. June and July 1888.

THIS part contains three very interesting papers by Drs. Steavenson, Gibbon, and Shaw respectively, on electrolysis, followed by a very smart debate. The

opponents were in a majority, but could not bring forward much evidence against the new treatment, while the supporters, of whom Dr. Playfair was the chief, described several cases showing its success. The consensus of opinion was rather that time and further experience were necessary before any decided conclusions could be arrived at. Dr. Williams, in his speech, made out a very strong case against Apostoli's statements.

Dr. Boxall's paper on 'Mercurialism in Lying-in Women' tends to show that, unless special precautions are always taken, there would usually be considerable danger from the use of sublimate injections.

J. INGLIS PARSONS, M.D.

NEW INVENTIONS.

THE NEW BATHS AT THE BUXTON HYDROPATHIC ESTABLISHMENT.

PROMPTED by the remodelling of the Spa at this inland watering-place, and the splendid set of new baths erected there at the expense of the Duke of Devonshire by Mr. John Smeaton, of Great Queen Street, Lincoln's Inn Fields; Mr. H. R. P. Lomas, of the Hydropathic Establishment in the same town (formerly known as Malvern House), has called to his aid the same well-known sanitary engineer, and given him full powers to remodel the bathing department of his establishment, and to make it as modern and as perfect as possible. One of the most notable improvements in the new baths is the department provided for the wet massage treatment, which is not only unique, but asserted to be the most elaborate in Europe. In the centre of this bath-house stands an oblong, tray-like bath, made of hammered tinned copper. Two polished copper perforated tubes run along the entire length, and are worked by the *masseur* by the aid of handles at the foot end. By this means a spray of water can be delivered at will over the body of the patient undergoing the treatment. At the head of the bath a girth-strap is fixed to receive the head of the patient; the water to the body of the bath being supplied by an inlet-pipe and two large valves of globular construction, the waste water being allowed to run off by an ingenious arrangement of pipes, which prevents it rising above high-water mark. Attached to the bath is a local douche, with a globular mixing chamber and thermometer, by which the temperature is regulated to the exact degree of heat required before striking the body of the patient. Another feature in this room is a thermal vapour-bath, with several local douches for cooling the temperature of the patient, which can be arranged to strike the patient in jets or sprays as described, and can be worked by the patient himself or the *masseur*. The interior of this bath is also lined with tinned copper, and the steam rises from the foot and passes through a trellis-like seat. Unlike the usual style of vapour-bath, where steam is introduced, it is almost noiseless in action. In addition to the various sprays and jets, a steam douche is attached for local application—a skilfully arranged apparatus, directed by the attendant without danger of scalding. An ingeniously arranged douche shower-spray, with wave and sitz, and rose and jets, is fixed in another part of the house; the heat of the water being regulated by a mixer of the description of that already described, and delivered locally in the usual manner. There is also a Pressnitz hip bath, with hip spray or needle, spine or rose, and with jets and sprays from the bottom, the temperature being arranged as before-mentioned. The decorations and fittings of the bath-room are of marble and encaustic tiles, thus ensuring the strictest cleanliness. The bath-house is also well warmed throughout and a regular temperature maintained. The rooms in the old bath-house have been fitted with baths of the Roman type, with shower, douche, and all the arrangements that constitute the modern luxurious bath. There is also a needle bath in this house, fitted with a powerful rain shower. Of course the success of such an establishment greatly depends on an efficient supply of steam and hot water at a high temperature. This necessity has been most carefully provided for by Mr. Smeaton, and the arrangement leaves nothing to be desired. The sanitary arrangements have received the most careful attention, and throughout the building there is a profuse supply of both hot and cold water. It is doubtful whether any of the renowned continental spas can boast of so complete a system of bathing arrangements as this well-frequented Derbyshire establishment. The appointments of the house, the cuisine, and the general comforts provided for visitors are of the most satisfactory kind, and are calculated to supplement the remedial advantages obtained from a course of the baths under the necessary medical advice. We hear that Mr. Lomas is so well pleased with the result that further alterations are contemplated.

THE SANITARY GARMENTS OF THE CELLULAR CLOTHING COMPANY.

COUNT RUMFORD, who is well known in connection with the Rumford stove, seems to have turned his attention to the clothing of the body as well as to the warming of the dwelling. In this connection he pointed out that it was a prime necessity of health to get rid of the exhalations of the body, and supply fresh air to surround it, and that the clothing of the body, or, at least, that nearest the skin, should be woven in such a manner that the efforts of nature should be assisted. It is to accomplish the latter important object that the Cellular Clothing has been introduced. As its name implies, this clothing is woven in cellular form, though the cells are not an open network, but are crossed by a fine fibre or fluff, which holds the air in its meshes. By this arrangement the air passing off from the body at its natural heat is temporarily held in the loose fibre, exactly as it is in the fur of quadrupeds clothed for the exigencies of cold, or as the earth is clothed when it is covered from inclement winds by its coat of snow. Thus, while abundant opportunity is provided for throwing off the exhalations, it is claimed that the cellular cloth offers the same facilities for the introduction of fresh air to the body. The cellular cloth is made of cotton, silk, a mixture of silk and cotton, cotton and wool, or wool itself. It is the texture, and not the material itself, that chiefly governs the warmth given off or supplied to the body. These claims are advanced only in favour of the cellular weaving, and not of a closer woven fabric.

From the variety of materials in which the cellular cloth is made, every one can satisfy their tastes or prejudices in what they select to wear. Cotton in this form certainly offers many advantages. It is much

cheaper than wool; consequently the new clothing is placed within the reach of a large section who cannot afford the more costly woollen materials; it is light in weight, most durable, washes well, and does not shrink as woollen materials do, but remains of the same dimensions until worn out. There is not the slightest doubt that the cellular mode of weaving is the correct one for clothing purposes, whatever material may be selected by the wearer.

The cellular clothing is made for both sexes, and includes vests, pants, pyjamma suits, body belts, tennis shirts, night shirts, caps, helmets, and cotton sheets and counterpanes. The mode of weaving enables the counterpanes to be embroidered with great facility, and so allows them to be more ornamented than a close-woven fabric can be. The cellular cloth has also been introduced for medical and surgical purposes, and for antiseptic and styptic sponges. The arguments advanced in favour of this material are fully set forth in a pamphlet published by the company, which shows that the inventor has followed the deductions of Count Rumford in his essay; arguments which have been strengthened by Deschanel in his natural philosophy, and by Ganot in his physics.

The clothing is manufactured at Bolton, and the London warehouse is at 75 Aldermanbury. The pamphlet can be had on application by persons desirous of seeing the arguments arrayed in favour of Cellular Clothing.

ABSORBENT PAPER DRESSINGS.

THE *Union Médicale* of Aug. 18 publishes an interesting communication by M. Bedoin on dressings of unglazed tissue paper, such as is employed for making cigarettes. These dressings are applied with the greatest facility, and constitute a succedaneum of gauze, which is often substituted for compresses, lint, linen or cotton bandages, as being less bulky and less accessible to different septic germs. It is employed in the form of compresses, composed of one or several double sheets, as bandages for imbricated dressings, or in very fine shavings in the form of lint. Applied in this manner, *papier absorbent* has the same effect as gauze, and is much less expensive. It may be employed with all the antiseptic precautions prescribed by Lister, either in a dry or moist state. In the latter case the paper is dipped into the original solution, or merely into pure water, when the spray producer is not employed. In ordinary dressings this paper is an excellent medium for most antiseptic remedies, such as were formerly applied by means of compresses or lint, in the form of ointments or solutions. Thus dressings of this paper may be prepared beforehand with morphine, belladonna, cocaine, iodine, &c., with the greatest ease.

The application of these dressings has been attended with excellent results in numerous and varied forms of affections (wounds, burns, blisters, affections of the skin and eyes, &c.). Comparative experiments have shown that the absorbent property possessed by paper lint is one-third greater than that of cotton lint. It is absolutely necessary to cover tha dressings with an impermeable external covering (Lister's mackintosh, laminated gutta-percha, oilskin, &c.) to prevent the edges of the paper removed (?) from the wound from stiffening.

In small hospitals, free dispensaries, and country districts, where the more costly dressings are not easily obtained, Dr. Bedoin's dressings of absorbent paper are likely to be of special service.

REDARD'S SYSTEM FOR DISINFECTING SURGICAL INSTRUMENTS.

M. REDARD has constructed an apparatus for disinfecting surgical instruments and objects employed in dressing wounds. He insists on the absolute necessity of disinfecting all surgical instruments. The methods employed are for the most part inefficient and impracticable. It is only by prolonged contact with the antiseptic substance that perforated needles, trocars, forceps, sponges, &c., can be rendered sterile. Disinfection by heat is an excellent method. All instruments, however, cannot be exposed to flame, and their immersion in liquid is only efficient at a temperature of 110° to 120°, and when the contact with the liquid is prolonged during three quarters of an hour for sounds, trocars, forceps, and during ten minutes for bistouries. Glycerine and oil have certain drawbacks. The former emits a thick, strong-smelling smoke when boiling; the latter requires an apparatus for regulating the temperature. M. Redard highly recommends solutions of chemically pure chloride of calcium, especially when mixed with glycerine, boiling at from 110° to 120°. The method of disinfection by steam at a pressure of 110° with M. Redard's apparatus, prolonged during fifteen or twenty minutes, is practicable and infallible. The manipulation of the instrument is perfectly simple.

NEW PREPARATIONS.

TABLOIDS OF WARBURG'S TINCTURE.

WE have received from Messrs. Burroughs, Wellcome, & Co. a sample of their new tabloids of 'Warburg's Tincture,' less the alcohol and the water. The remedy is one which is exceedingly popular with travellers and residents in malarial districts, often under circumstances which render compactness and portability a desideratum. Apart from this consideration, the remedy is excessively disagreeable to take, and although a patient with a bad fit of ague is not likely to prove intractable in the matter of taste, yet the possibility of taking it minus the disagreeable *arrière pensée* is one the value of which even lever ridden patients will appreciate. We understand that a consignment is ready to be sent to Mr. Stanley if only a messenger can be found.

DIETETIC PREPARATIONS.

SPARKLING WINES (*continued*).

CHAMPAGNES.

THE only other wines to which we intend to draw attention, from the Rheims and Epernay districts, are those of Messrs. Henry Eckel & Co., Epernay, and Messrs. W. & G. Gilbey, Pantheon, Oxford Street. The wine of Eckel & Co. is one of the few champagnes sent into the English market that is not liqueured, and as such is especially adapted for invalids or others who prefer a thoroughly dry wine. The wine is of very moderate price for a high class champagne; it is also prepared of similar purity, but lighter and of less alcoholic strength, at a lower price.

We append our analyst's report, which is most satisfactory :—

Specific gravity at 60° Fahr.	1001·3	
Absolute alcohol by weight	10·85	per cent.
Equal to proof spirit	23·54	,,
Glucose	2·72	per cent.
Extractives, &c. ...	1·06	,,
Ash	·16	,,
Total solids .....3·94		
Acidity calculated as acetic acid ...	·48	,,
Polarisation	−4·2	,,

This champagne is a dry wine of excellent quality ; its general purity and freedom from sugar and extractives render it especially applicable for medical purposes.

It is carefully fermented, and is in all respects a satisfactory wine.

Amongst the other samples of champagne that have been examined, were several of a very moderate price from Messrs. Gilbey & Co. All of these are sound wholesome wines, though more suitable for persons in good health than the valetudinarian, at least with one exception.

The wine in question is No. 4A, 1881, *sec*, ; it is a pure clean drinking champagne, with good bouquet, dry, without being excessively so, and except in cases where a 'brut' wine is considered necessary, may be confidently placed in the physician's list of wines fit for invalids. It can be purchased at 60*s*. per dozen.

As the result of our analytical examination, it is satisfactory to state that all the samples examined are agreeable and sound wines, and show a standard of purity and quality much in excess of what we expected. In selecting the champagnes already reported upon, adaptability to medical purposes has been specially considered.

MISCELLANY.

Ingrowing Nails.—Patin recommends a long-continued footbath, after which the nail must be carefully wiped dry. Then paint with traumaticin between the nail and the granulations for several days. The chloroform penetrates into the flesh, and, after evaporation, leaves a thin layer of gutta percha, which gradually separates the nail from the granulations, and protects the latter against external influences. Complete this protection with sticking-plaster, which must be removed only for the purpose of another painting. When the nail, which must be left untouched for some time, has sufficiently grown out, its prominent portion must be cut off, the corners being rounded off. Healing will be all the safer if the patient abstains as much as possible from walking and wears very easy shoes.

At the meeting of the Académie des Sciences, July 16, 1888, MM. Armand Gautier and L. Mourgues described their experiments to determine the alkaloids of cod-liver oil, of which some that they have discovered are very active. They have analysed both brown and colourless cod-liver oil. Alkaloids have been found in the latter, which is recognised as the most active. The bases subjected to fractional distillation in a bath of oil, separate into two groups (almost equal in weight) of volatile and fixed bases. The bases are as follows :—Morrhuine (a new base), butylamine, amylamine, hexylamine, hydrolutidine (a new base), aselline (a new base). A small quantity of lecithine and gaduinic (?) acid also exists in cod-liver oil ; the latter is an azotic acid very easily crystallised ; it is powerful and gives crystallised chloroplatinates.

Royal College of Surgeons of England.—The annual calendar has just been published by the council of the college. From it we ascertain the following facts :—It appears that there are now 17,027 members on the roll. If to these are added the 1,122 Fellows (703 of whom obtained the distinction by examination) it represents a total of 18,149 qualified medical men, some of them practising in foreign States. The licentiates in dental surgery number 646. During the past collegiate year 137 candidates went up for the primary or anatomical and physiological examination for the Fellowship, 75 of whom were referred. At the pass or surgical examination out of 88, 44, having failed to acquit themselves to the satisfaction of the court of examiners, were referred to their professional studies. For the first examination, under the scheme for an examining board in England, in conjunction with the Royal College of Physicians, there were 761 candidates for the examination in elementary anatomy, 670 of whom passed ; in elementary physiology 848 candidates presented themselves, of whom 671 passed. In chemistry, out of 871 candidates 568 passed, and in materia medica 509 out of 769 passed. The examiners in anatomy and physiology, under the scheme appointed in conjunction with the Royal College of Physicians, conduct the primary under the old regulations as well as the second examination of the examining board. In anatomy 889 candidates presented themselves, 549 of whom passed ; in physiology 519 passed out of 881 candidates. At the final examination the court of examiners have examined 862 candidates in surgery, of whom 473 passed and 389 were referred to their professional studies. The income of the college from all sources during the past year amounted to £40,654, derived principally from fees paid by candidates at the examinations—viz., £20,933 ; Erasmus Wilson's bequest, £11,899 ; rents from chambers adjoining the college produced £1,815 ; dividends on stock, £654; and sale of stock, £4,637. The expenditure amounted to £40,017, the largest item being £8,398, fees paid to examiners ; the next being for extension to college premises, £8,152 ; salaries, wages, and pensions for officers and servants in the three departments, library, museum, and office, amounted to £4,699 ; taxes, rates, insurances, diplomas, stamps, absorb the sum of £1,451; half expenses for examination hall, £2,919 ; purchase of stock, £7,518; Savoy estate, £1,800 ; while under miscellaneous items, alterations and repairs, fuel and light, printing, stationery, &c., about £5,000 appears to have been expended.

Hospitals among the Greeks.—Miss Jane E. Harrison recently delivered a lecture at Toynbee Hall, Commercial Street, Whitechapel, on 'Hospitals among the Greeks.' The lecturer said she should have to bring before her audience the great god of medicine of the Greeks, Æsculapius, his temple, and some of the monuments connected with it. There was no one of the Greeks gods who had been so thoroughly misunderstood as Æsculapius. He was the one god whom the people came to consult in their difficulties, and especially in cases of sickness. The temple of this god was in Athens, and it had only recently been excavated. It was really nothing more nor less than a hospital, where people went to get their diseases diagnosed and cured. This, like the other Greek temples or hospitals, had three indispensable things—a shrine, a large apartment in which the patients slept or walked about, and a spring of clear water, known as the holy well. From the very earliest times the people were always careful to choose for their temples very healthy places—as a rule, some far away inner valley, where there was a pleasant grove of trees and plenty of pure water. Miss Harrison went on to describe the method of treatment which the patients underwent, and the manner in which they were really made to dream, and thus came to believe so thoroughly in the powers of the dream god Æsculapius. In the first place a patient had to leave his home and most of his friends, and go away into some quiet valley—to put it in modern language, he would have a complete change of environment. He found everything quiet and tranquil, and he was shown all the

offerings made by former patients in thankfulness for the good they had received from the dream god. He would have a long conversation with a priest, who by this means discovered what the patient's ailment was, and after a burnt offering on the altar he went to bed. It was not at all wonderful, under the circumstances, that he had a dream. There were some who would not conform to the rules as to diet, and we were told that the gods wisely refused to visit them in the night. The dream from which the patient derived so much benefit was supposed to come during the ceremony of lying-in in the temple. There were, however, some heavy sleepers who could not dream, and these were allowed to have a friend to dream for them, or for a small sum they could hire a professional dreamer. In some instances there was no doubt the priests dressed up in fantastic garments, and appeared before the patients, who were thus led to believe they saw visions. If, however, the patients derived benefits from the dreams, or fancied dreams, there was perhaps no harm in practising a little deception. They must bear in mind that those were days of strong superstition, but of the truths of this belief in the gods there was ample evidence, and the strongest evidence was, she thought, to be obtained from some comic writings of what occurred in the temples. They must, of course, make allowances for exaggeration, but they were sure to be based upon fact. After the dreams, practical remedies were applied, and many of the remedies of Æsculapius were the same as would be given by modern doctors in similar disorders. Sometimes even the doctors went to Æsculapius for advice, and there was an instance of a doctor offering as a token of his gratitude a stone set of his surgical instruments. Miss Harrison then gave an interesting description of a number of the stone offerings placed in the temple by patients.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH, AND FACULTY OF PHYSICIANS AND SURGEONS, GLASGOW.

The following questions were set at the quarterly Examination for the Triple Qualification, which took place in Edinburgh in October :—

First Examination.

Questions in Elementary Anatomy.

All of which are to be answered.

I. Enumerate the bones which are concerned in the formation of the orbit, and mention their relative position.

II. Name the ligaments by which two typical vertebræ are connected together.

III. Give the course, relations, and branches of the popliteal artery.

IV. Describe the origin, course, mode of termination, and relations of the musculo-spiral nerve.

Questions in Chemistry.

Four questions, all of which are to be answered.

I. Name the usual instrument employed for the measurement of temperature, and give a brief description of its construction.

II. Describe the preparation of nitric acid on the *manufacturing scale*, giving the equation. State its more important properties, and the tests for it when free and combined.

III. What is 'white arsenic'? State how it is obtained. Describe Reinsch's test for arsenic.

IV. How is ether prepared? Give the equations, and mention its chief properties.

Second Examination.

Questions in Materia Medica.

Three questions, all of which are to be answered.

I. Mention three diuretics, adding the appropriate doses.

II. Mention three antipyretic drugs and their doses.

III. How is the vinum ipecacuanhæ prepared? Give the composition of the pilula ipecacuanhæ cum scilla.

Questions in Advanced Anatomy.

All of which are to be answered.

I. Give the origin, course, relations, and distribution of the phrenic nerve.

II. *Name* the branches given off by the external carotid artery, and *describe* those derived from its posterior aspect.

III. Describe the external oblique muscle of the abdomen.

IV. What is the usual arrangement of the peritoneum where it covers the cæcum? Describe the cæcum and iliocæcal valve.

Questions in Physiology.

All of which are to be answered.

I. Describe how the first blood capillaries and blood corpuscles are formed in the fœtus.

II. Describe the act of deglutition, and state what muscles are concerned, what their nerve supply is, where the nerve centre that governs the act is placed, and what are the afferent nerves.

III. What are the causes of the cardiac sounds?

IV. Describe the function of the organ of Corti, and of the semicircular canals.

Questions in Midwifery and Gynæcology.

Three questions must be answered, of which the last must be one.

I. Abortion—its causes, and treatment, embracing (*a*) prophylactic; (*b*) arrestive; (*c*) inevitable.

II. Presentation of the fœtus—What is understood by the terms,—the *presenting* part, the *occiput*, the *sinciput*, the *vertex*, the *bregma*?

III. Prolapse of the funis—State the causes, diagnosis, prognosis, and treatment.

IV. What are the symptoms, local and general, of carcinoma of the cervix uteri? Give the differential diagnosis, and the treatment of the symptoms.

Questions in Surgery,

All of which are to be answered.

I. Caries of the bodies of the vertebræ—(1) What are the causes of death in this disease? (2) Where do the abscesses connected with cervical, dorsal, and lumbar caries usually discharge themselves?

II. Popliteal aneurism—Describe the methods of treatment by flexion, by arterial compression, and by ligature.

III. What structures are apt to be ruptured in subcoracoid dislocation of the humerus? Give the symptoms of that dislocation.

IV. Describe excision of the upper jaw.

Surgical Anatomy.

One of which only is to be answered.

I. Give the distribution of the external popliteal nerve, and the effects produced by its division.

II. What is the course of the lingual artery? Mention in order from without inwards the structures seen in cutting down upon it.

Final Examination.

Questions in Medicine,

Three only of which are to be answered.

I. Enumerate and explain the initial symptoms of locomotor ataxia, and give the anatomical changes in the spinal cord in the first stage of the disease.

II. Define purpura. Describe the varieties of the disease. Give the diagnosis from scorbutus, and the treatment.

III. Give the symptoms and pathology of gastric ulcer. State fully, and explain the reasons for the treatment you would employ in this disease.

IV. Give the diagnosis, morbid anatomy, and treatment of favus.

Questions in Therapeutics.

All of which are to be answered, including the Prescription.

I. How does iodide of potassium prove of service in aneurism? Detail the form of diet to be observed in such a case.

II. How may an acute attack of angina pectoris sometimes be speedily relieved? and what means should be adopted to prevent a recurrence of the attack?

III. By what external applications may neuralgia be relieved? and how do the remedies usually employed internally bring about a cure?

Prescription.

To be written in unabbreviated Latin, the directions in English.

Prescribe acid tartrate of potash in the form of electuary.

Questions in Medical Jurisprudence and Hygiene.

Four questions, of which three are to be answered, and in these 3 and 4 must be included.

I. Mention some diseases which are apt to be feigned, and state how you would proceed to investigate them.

II. What are the symptoms produced by starvation, when food and drink are both unattainable? How long does life generally last in such circumstances; and describe the appearances presented shortly before death, as also those found *post mortem*.

III. What is opium? Mention its two most prominent active principles. What is the strength, and what would be a poisonous dose of tincture of opium for an adult, the symptoms produced by it, and with what diseases might such a case be confounded, giving the diagnostic points of each? How would you treat a case of opium poisoning?

IV. Describe the A B C method of the disposal of sewage, and state any advantages or disadvantages possessed by it.

The London Medical Recorder.

Article 1120.

WARD COUSINS ON TOPICAL REMEDIES FOR DISORDERS OF THE ANUS AND RECTUM, AND IMPROVED INSTRUMENTS FOR THEIR APPLICATION.*

The common disorders of the anus and rectum exhibit very varying degrees of severity. Sometimes local distress, pain, and frequent bleeding necessitate surgical interference without delay; at other times, any operation appears undesirable in consequence of age or extensive visceral disease. The judicious surgeon will always select those cases which are favourable for radical cure, and in this way avoid the complications and disastrous results of bygone practice.

Now every day we meet with mild forms of these diseases, for which our patients refuse altogether to undergo surgical treatment, but they are very anxious to adopt palliative measures. Fortunately, in a large number of cases, the judicious application of topical remedies is followed by great temporary relief, and sometimes even by permanent cure.

Of course anal and rectal affections are not always mere local disorders. In many cases they are excited by general diseases and visceral obstructions, and the removal of the primary cause always demands the first attention. Respecting general treatment, great relief can often be obtained by regulating the secretions, by attention to the diet, and especially by avoiding all excesses in eating, drinking, and tobacco. Aperient and laxative remedies are frequently serviceable, but they must always be mild and unirritating in their action.

With these few remarks I shall pass to my special topic—the local treatment—and I shall briefly narrate my experience as to the best applications, and the best method of applying them.

During the act of defæcation in the healthy condition of the bowel, the blood-vessels around the orifice are distended, and slight protrusion of the mucous membrane takes place, and, whenever the muscular tension and vascular turgescence of the part are habitually prolonged and severe, the very conditions are present which promote the development of hæmorrhoidal troubles. In cases of ordinary constipation, and prior to the expulsion of hardened accumulations, some softening or lubricating agent may with great advantage be introduced into the rectum, and for this purpose I strongly recommend a smooth and creamy mixture of boracic ointment, glycerine, and lanoline.†

In relaxed conditions of the anus and rectum, with a tendency to prolapse, prolonged efforts during evacuation distend the dilated vessels, aggravate the varicose state of the anus, and increase the local distress. Straining at stool must at all times be carefully avoided. It is a good plan to get a regular action of the bowels just before going to bed, instead of early in the morning, for then, during the repose of the night, the intumescence of the organs has time to subside. Immediately after an evacuation the anus should always be washed, and the well-soaped hand is the best instrument for the purpose. Habitual cleanliness is one of the most effective ways of preventing hæmorrhoidal disorders. The irritating secretions and mucus from the orifice of the gut are removed, and the friction tends to brace up the part and empty the distended vessels. There is no region of the body which really requires so much sanitary attention, but, even in these days of hygienic enthusiasm, it is too often the last part to be cleansed.

The affection commonly styled 'piles' is in many cases nothing more than soreness and irritation of the anus, produced by daily neglect and local impurity. When the surrounding skin is healthy any ordinary soap may be selected for washing purposes. Sometimes the folds of skin around the orifice are swollen and irritable, and often external hæmorrhoids cause a great deal of irritation. In persons of a full habit a local erythema is very common, extending over the nates. The skin is red and moist, and by friction it becomes tender and excoriated. The disorder is generally easily cured by careful attention to the part after every evacuation. I have used with great success well-washed soft soap made into a smooth compound with the alcoholic solution of coal tar, or the oil of Cade (Eucalyptus globulus). After the lavement the part must be carefully dried with a soft towel, and dusted with a fine powder composed of carbonate of bismuth, oxide of zinc, and starch.

In cases of chronic gout, and in other constitutional derangements, an obstinate form of eczema attacks the anus and genital organs, and the tormenting itching which attends the disease causes persistent scratching and excoriation. Sometimes the skin becomes infiltrated and fissured in the direction of the normal radiating folds. This disorder cannot, of course, be treated apart from the constitutional condition with which it is associated; but the daily use of the soap I have mentioned is often followed by remarkable benefit. The drying powder may then be applied over the part, or a little of the boracic ointment gently rubbed in.

The local treatment of prolapsus ani and hæmorrhoidal disorders is a matter of daily importance. In acute inflammatory affections of the anus rest in bed should be maintained, and the patient will be much relieved by sitting two or three times a day in a hot carbolised bath.

In all cases requiring washing and irrigation, I recommend the use of a very convenient contrivance. It consists of a metal pan with a deep well in the bottom, and it is supported on short legs. The patient sits on the side of this well, so that the anus and genital organs can be completely bathed. It is especially serviceable in inflammatory disorders of the bowel, and after operations for hæmorrhoids and fistula. It is fitted with inlet and outlet pipes for continuous irrigation—a mode of treatment I adopt after all rectal and perineal operations at the Royal Portsmouth Hospital, and I hope to describe its utility in these cases on a future occasion.

Whenever internal piles come down during defæcation, they must always be carefully washed and returned. In prolapsus ani the protrusion should also be carefully pushed back directly the stool has

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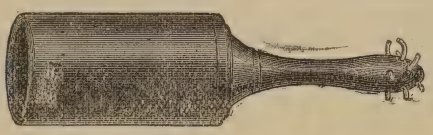
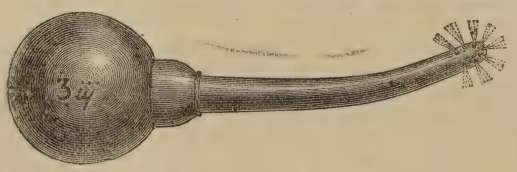
† The purified fat obtained from sheep's wool is the best basis for all ointments intended for soothing and protecting purposes.

escaped. Many of my patients, labouring under aggravated troubles of this sort, have experienced much relief by using for a few weeks a bed-pan in the horizontal position. At all times the inconveniences attending the act of defæcation may be alleviated by introducing into the bowel a lubricating agent to prevent undue straining, and to facilitate the escape of the motion, and for this purpose the antiseptic compound I have mentioned is admirably adapted. The anus should then be carefully washed, and a little stimulating ointment put into the bowel, to check excessive secretion, and to rouse the mucous follicles to more healthy activity. I often employ a remedy containing a little oxide or subchloride of mercury and a few grains of iodoform. If pruritus ani is troublesome, cocaine may also be added to it with much advantage.

It is necessary here to refer to a matter which generally receives too little attention. Patients should always be instructed as to the right way of applying local applications. It is of great importance that these are distributed upon the mucous surface of the bowel well within the sphincter, and the only way of obtaining this result is by the use of an ointment introducer. The simple instrument I have designed for this purpose is represented in the engraving (Fig. 1). It consists of a very smooth anal tube, a cylindrical receptacle for the ointment, and



a vulcanite piston. The ointment is projected through the perforations in the anal tube by simply compressing the piston with the finger. The injector is very readily charged, and is especially adapted for self-application. The rectal injector (Fig. 2) is intended for the use of fluid remedies, and is capable



of holding three drachms. For the introduction of larger doses the anal tube can be used with a second hand-ball.

Hæmorrhage is often a very prominent symptom in many of the common disorders of the rectum. The quantity of the discharge varies a great deal in different cases. At all times the amount of blood lost at each evacuation must be carefully ascertained. Sometimes the fæces are only smeared with spots and streaks of blood, while at other times the loss is very considerable and alarming.

Whenever free bleeding has suddenly occurred, or the drain has continued for a long period unchecked, the case is not one for mere palliative treatment, but ought to pass without delay into the hands of the surgeon.

In many cases, however, of moderate severity, the daily use of local remedies will be followed by great benefit. The same diligent attention to cleanliness after an evacuation must be practised, and then an ointment containing the persulphate of iron should be carefully applied to the diseased surface. The fluid extract of witch hazel is also a very efficacious remedy. When a very powerful hæmostatic is required, the persulphate may be added to the hazeline with great advantage. I generally order two drachms of this solution, diluted with a little water, to be used regularly for two or three weeks. For all cases of hæmorrhage, rest in the horizontal position after defæcation is extremely desirable, as it tends to relieve the local congestion, and to promote the astringent action of the remedy.

One word respecting the value of anodyne applications. The distressing pain which attends the evacuation of the bowels in some diseases, and continues for hours after, often demands local palliative treatment. Many cases of pain and spasm of the orifice are greatly relieved by the topical use of cocaine; but, after many trials, I found a combination of morphine and cocaine more generally useful. The application of this compound sedative often acts like a charm, and quickly gives relief. The suffering caused by fissure of the anus and ulceration within the sphincter is rendered bearable by this remedy, and in recent cases I have sometimes found its use, combined with digital dilatation, rapidly followed by permanent cure, without any other surgical interference. It is invaluable in the treatment of stricture of the rectum, and it should be introduced into the bowel ten minutes before the use of the dilator. In chronic ulceration and malignant disease it can be freely employed as a palliative remedy; and, in fact, in all cases in which pain and hyperæsthesia are prominent symptoms.

In conclusion, I desire to mention that the remedies and instruments referred to in this communication have been manufactured for me by Messrs. Burroughs & Wellcome, and I am much indebted to that firm for the care and skill with which they have carried out my suggestions.

JOHN WARD COUSINS, M.D., F.R.C.S.Lond.

ARTICLE 1121.

STEVENS ON ANOMALIES OF THE OCULAR MUSCLES.*

THESE two papers are separated by an interval of a year, and the second naturally includes much that is a repetition of the first; both, however, will well repay perusal, for throughout they give evidence of large experience and careful thought, and they deal with a branch of the subject which is but little understood, and concerning which there are many misconceptions. We shall endeavour to give a concise *résumé* of the more important features of both papers.

In the first place, the author excludes from consideration altogether all cases in which there is inability to maintain binocular fixation, *i.e.* in which a squint is habitually present. He deals solely with those in which there is a tendency to deviation, but this is overcome, as a rule, by an effort. The boundary line is necessarily a shifting one, for in these latter cases squint will occur under certain conditions, but the division is one which has a practical basis.

This group of cases has usually been designated by the phrase 'insufficiency' of certain muscles, and attention has been directed almost exclusively to supposed 'insufficiency of the internal recti.'

The author objects to the term as indicating an

* Knapp's *Archives*, June 1, xvi., part 2; and xvii., No. 2.

erroneous view of the nature of the affection in most cases, and considers that the internal recti have received an amount of attention which they have done nothing to deserve. He proposes an altogether new nomenclature for the whole class of cases in which there is a tendency to deviation.

First, he would divide all cases under two generic heads, the one 'orthophoria,' or the normal condition, in which there is no tendency to departure from parallelism, the other 'heterophoria' which includes every departure from the normal condition. Heterophoria is subdivided into 'esophoria,' tending inwards, 'exophoria,' tending outwards, 'hyperphoria,' in which one eye has a tendency to deviate upwards relatively to its fellow; the term does not indicate whether this is due to defective action of the superior rectus of one eye, or the inferior of the other, thus 'right hyperphoria' would merely mean that the right eye has a tendency to deviate upwards as compared with the left. The prominence given to this hyperphoria in both papers is one of the noticeable points.

It has generally been assumed that the eyes can only be moved in the vertical plane together; it is pointed out that this is not strictly true, but that most people can easily overcome a vertical prism of 2° or 3°, and many a much stronger prism. The ability to do this does not indicate any abnormal tendency; if the power to overcome a prism is the same, whether the base be upwards or downwards, if the one is overcome more easily than the other, a suspicion of hyperphoria would be aroused.

As regards the standard of 'equilibrium,' the author objects to the manner in which this term has hitherto been used. Most authorities, following the example of Graefe, have considered this to mean the ability, without excessive effort, to maintain binocular fixation at the reading distance, even although, at other distances, binocular fixation was difficult. The author says:—'Such a standard of equilibrium should not be accepted. Equilibrium does not exist when comparatively easy fusion of images is gained at one point at the expense of difficulty or impossibility of fusion at another. In equilibrium the visual lines of the two eyes should be parallel when the force of the will in accommodating or adjusting the eyes is removed—that is, when the minimum of nervous impulse is directed to the ocular muscles.' Speaking of the line-and-dot test, he says, 'In respect to this one test for a single condition, there is not a well-established rule or custom. Even were complete uniformity observed in the examinations or records of this condition of the ocular muscles, this method is quite inadequate for the determination of several other conditions, and extremely unreliable even for this one.' . . . 'No just appreciation of the muscular balance can be arrived at while the accommodation is considerably exercised. Hence the principal determinations should be made at such a distance as to render the accommodation practically relaxed, and, while the determination of the inclination of the visual lines in the act of accommodation may be of importance, and may throw some light upon false tendencies, it should not be regarded as a method of representing the presence of equilibrium or of the degree of deviation from it.'

The practical bearing of this distinction is shown by the following quotation from another part of the author's paper:—'Graefe sought to adjust the eyes for the near point (*i.e.* reading distance) at any sacrifice, short of diplopia, of the relations of the visual lines at a greater distance. In the system here represented the end to be attained is perfect equilibrium in all respects—in vertical as well as in lateral directions; and at the point of greatest relaxation both of the directing and accommodating muscles, in the expectation that, this being established, easy adjustments will result at all points, near and distant.'

The method adopted by the author is to use a candle against a black background at a distance of 20 feet; then to produce diplopia first in the horizontal direction by means of a prism. The presence of hyperphoria is thus ascertained. The author believes that if, as is usually done, a vertical prism is used first, and the lateral tendencies tested, the eyes are apt to adjust themselves to the new conditions, and hyperphoria may be overlooked. A slight readjustment in the horizontal plane is of less importance. The prism is then found which is required to render the images level. The prism is then placed vertically, and the horizontal tendencies are tested; a prism of 7° will usually suffice. Even, however, if no abnormal tendency is thus revealed, equilibrium cannot be assumed till the power of adduction has been tested; the former, the author considers, should be equal to a prism of 8°, the latter to one of 50°, in which he agrees pretty closely with other authorities. In the case of adduction much, however, depends on practice.

Hyperphoria.—Considerable importance is attached by the author to this condition. He points out that since in the normal condition a prism of only 2° or 3° can be overcome, a very slight degree of hyperphoria is equivalent to a very considerable lateral deviation, since the muscles concerned in this latter can in the normal condition overcome much stronger prisms. It produces considerable annoyance in vision from the fact that the images of the two eyes are very close together, and may even overlap. A certain amount of amblyopia is frequently present, which is attributed to the suppression of one image. Hyperphoria is found to exert a considerable influence on the lateral tendencies, producing most contradictory results in testing; thus, for instance, there may be found esophoria at twenty feet, with inability to converge sufficiently at the reading distance; there may be restricted adduction with esophoria, and restricted abduction with exophoria. Anomalous conditions of this nature should, the author thinks, always arouse a suspicion of the presence of hyperphoria. Of course these anomalous conditions may be found together, but we cannot see that the writer makes any attempt to give a satisfactory explanation of their association. These inconsistencies are said to disappear as soon as the hyperphoria is corrected. Another local condition which the author attributes to this error is hypersecretion of tears. Any hint as to the cause of a condition not hitherto explained is worth investigating, but we fail to see much force in the explanation given of the connection in this case also. Other remote consequences of the condition are given, as involuntary convulsive contractions of the facial muscles, spasmodic closure of the lids of one eye, a lowering of the head to one side, and in some cases permanent contraction of the muscles of the neck, even to the extent of rendering tenotomy of the sterno-mastoid necessary. Neuralgia, neurasthenia, insomnia, chorea, epilepsy, and cataract are also enumerated among the manifestations of hyperphoria; indeed, an upward tendency of one eye a couple of degrees would seem to mean more than

Lord Burleigh's shake of the head. The condition has so far been little investigated, and we are loth therefore to draw conclusions; but it is difficult to avoid a suspicion that the effect has in some of these instances been mistaken for the cause.

Esophoria.—We have left ourselves little space to consider the author's statements with regard to this condition, to which he attaches considerable importance. He considers that its frequency, as compared with exophoria, is as 3 to 1; it by no means of necessity indicates that the power of abduction is limited in proportion, but the coexistence of a high degree of esophoria and good abducting power should arouse a suspicion of hyperphoria. On the other hand, the author would appear to consider that the inability to overcome a prism of 8° with base inwards sufficient evidence of esophoria, unless exophoria could be shown to exist. 'Of a large class of cases which go from one oculist to another in the hope of relief from some new treatment, and submit to an almost endless change of spectacles with little if any advantage, a very considerable number are the victims of very slight grades of esophoria. They gain no relief until this too much neglected anomaly receives due attention, when their asthenopic symptom disappears.' In some cases the accommodation is suppressed in order to avoid too great convergence, and with this suppression there is often associated a widely dilated and sluggish pupil. Some of these patients are said to be occasionally annoyed when reading by the appearance of a black spot on the page. This the writer attributes to one eye deviating inwards, so that the 'blind spot appears at the reading point.' It is obvious that this explanation will not hold good, as the blind spot could not possibly appear as a positive scotoma.

The author's treatment in most of these cases is what he calls graduated tenotomy. A minute incision is made over the insertion of the tendon, and is carried through the latter with very fine scissors. The tendon is then divided from this opening towards each border, a few fibres being left uncut. If a greater effect is afterwards found to be required these fibres are divided, an extremely fine strabismus hook being used. He considers that there is 'nothing in the range of surgery more satisfactory or certain than this,' an expression which might be designated as decidedly strong.

There are many points about abnormalities of the ocular muscles which are not yet understood, and it is well that attention should be called to any defects or omissions in the manner of investigating these cases; but we doubt whether in some instances the author has not attached too much importance to symptoms which are merely concomitant, and whether he has laid sufficient stress upon the fact that the control which a person possesses over their ocular muscles varies at different times. Occasionally he seems so anxious to discover a faulty tendency that we cannot but suspect that his judgment has been warped. As, for instance, the following passage:—'In a certain number of cases I have been able after long-continued search, with failure to discover the real muscular balance, to find the faulty tendencies after faithfully excluding one of the eyes for some days or weeks.' We should ourselves hesitate to admit a test of this nature, unless there were other indications present of 'heterophoria,' and even then we should want to know its effect upon a large number of persons whose eyes were orthophoric. W. ADAMS FROST.

ARTICLE 1122.

SCHNITT ON ARTHRITIS NODOSA INFANTUM.

GUSTAV SCHNITT, writing in the *Finska Läkaresällskapet Handlingar*, November 1888, gives in full detail two cases of this affection. The first patient was a boy, aged 11½, in whom the disease had lasted for two and a half years. He was the son of a sailor, and from the account of his mother there was no hereditary disease, nor syphilis, though an uncle had suffered from tuberculosis. The rheumatism was brought on by the boy bathing in the sea while ice was still floating about. The first symptom was stiff neck, after which the joints of the legs and feet became painful, swollen, and stiff, so that for a year the child could not walk. After this the fingers and wrists became affected, and about eighteen months from the commencement of the disease the articulations of the elbow and shoulder were also implicated. The pain in the joints was so great during the night that he often lost his sleep. The soreness was worse during bad weather. After a year the pain in the legs began to diminish, but remained in the arms, where it is still felt from time to time. The patient was unable to feed himself for three months, during which time his appetite was bad. At present the boy is very feeble and emaciated. He is anæmic, and suffers from frequent perspirations during the night. Nearly all the articulations in the body are affected, and a number of them are ankylosed. The spinal column is stiffened, so that the movements of the head and body are much hindered. So many articulations were found affected that it is briefer to specify those in which some motility remained.

The joints of the wrist and left foot were susceptible of passive motion; both knees could be partially flexed, and the shoulder-joint still possessed a considerable power of motion.

The position of the patient's limbs was characteristic. The elbows were bent at a right angle, the hands were pronated and somewhat bent towards the forearm, and the fingers twisted towards the ulnar side. The thighs were bent, the left adducted, so that the knee rested upon the right leg immediately above the opposite knee. The knee-joints were bent, and the two feet presented a decided valgus which was worse upon the left side. The swelling was greatest in the articulations of the knee, the feet, the elbows, and the wrists. There is a soreness in the joints brought out by pressure, but any active pain has now ceased. The skin over the joints is of the normal colour. In those articulations where the swelling is great the skin is thinner than usual.

Irritability to galvanism is somewhat diminished, but there is no reaction of degeneration. Sensibility is normal. The treatment consisted of cod-liver oil, iodide of potassium, tincture of iron, Fowler's solution with massage, electricity, and tepid baths. The treatment had little effect at first, but lately there has been considerable improvement, the articulations of the wrist and feet having recovered a certain power of motion. The general health of the patient has improved, and he has gained in weight.

The second case was a girl of 13 years. The rheumatism commenced two years ago. There were no constitutional diseases noted in the family. The rheumatism commenced in the acute form, and all the larger joints were soon affected in the same manner as in the first case. She is at present much

reduced in strength, emaciated and anæmic. Little power of motion exists in the joints, though there is no ankylosis. On passive movement a crepitation is heard. No improvement has as yet been noticed through treatment.

The author considers that the characteristics of this disease in children are its commencement, acute or subacute, and its rapid course. He thinks the prognosis better than in adults. The pathological anatomy of the disease has been little studied. As far as can be judged by outward examination, it seems to consist of a swelling of the bones forming the articulations, then the capsule and the hypertrophied ligaments become shrunk and retracted. There is absorption of the cartilages, and the articulating surfaces in the end are conjoined by fibrous ankylosis.

W. W. Ireland, M.D.

Article 1123.

BRYANT ON THE VALVES OF THE INTESTINAL VEINS.*

Following upon Hochstetter's researches (London Medical Recorder, Feb. 20, 1888, p. 70) the author has investigated the condition of the valves of the intestinal veins in various animals and in man.

Animals.—No valves were found in the guinea-pig. In only one rabbit the veins of the last four or five inches of the large intestine were found well furnished with valves. The cat has a number of competent valves, most numerous above and below the cæcum. The dog possesses a more efficient set of valves than any of the other animals examined, as they were found along the whole length of the intestine.

Man.—Infants at birth.—Valves were found at irregular intervals along the whole course of the intestines, more numerous on the large intestines than on the small. On the large intestine they occurred in the intestinal veins (venæ breves) at or near their mouths, and sometimes in the mouths of the main tributaries of these veins. The valves are fewer in number in the small intestines, but are rarely absent, and are occasionally found in as many as one in five of the venæ breves. The following table shows the percentage of valves found in a number of the infants examined, taking 100 as the maximum; that is, one at the mouth of each one of the venæ breves—

No.							
1.	In large intestine,	100	p. c.	....	In small intestine,	20	p. c.
2.	,, ,,	100		....	,, ,,		$\frac{2}{3}$
3.	,, ,,	90		....	,, ,,		$\frac{1}{2}$
4.	,, ,,	87		....	,, ,,		$1\frac{1}{6}$
5.	,, ,,	85		....	,, ,,		$2\frac{2}{3}$
6.	,, ,,	84		....	,, ,,		4
7.	,, ,,	80		....	,, ,,		$\frac{1}{6}$
8.	,, ,,	77		....	,, ,,		$\frac{1}{2}$
9.	,, ,,	63		....	,, ,,		$\frac{1}{100}$
10.	,, ,,	32		....	,, ,,		1
11.	,, ,,	25		....	,, ,,		10
12.	,, ,,	20		....	,, ,,		0
13.	,, ,,	10		....	,, ,,		$\frac{1}{50}$
14.	,, ,,	4		....	,, ,,		$\frac{1}{10}$
15.	,, ,,	2		....	,, ,,		0
16.	,, ,,	0		....	,, ,,		$\frac{1}{50}$
17.	,, ,,	0		....	,, ,,		0

Children.—Three were examined; (1) aged two weeks; large intestine, valves in 10 per cent. of venæ breves; small, three valves only. (2) aged five months; only four valves found which were on the jejunum. (3) aged ten years; no valves on large intestine, those on small most numerous on jejunum.

Adults.—Few valves were found in any one individual, even the youngest, and it did not appear that age after adolescence had much influence on the number of valves in the intestine. When the veins in the other parts of the great omentum were intact, it was noticed that valves were less numerous along the free border in those veins which in the erect posture would be nearly horizontal. Also it was noticed, that the disappearance of valves seemed to begin in one or two of the main veins lying near the centre of the omentum, and that the valves disappeared in the direct course of these veins before they did in their tributaries.

The following table shows the number of competent valves found in the various parts of the intestines of human adults :—

No.	On Cæcum.	On the rest of Large Intestines.	On Small Intestines. In venæ breves.	On Small Intestines. In superficial branches.	Total.
1	5	2 on ascending colon.	22 (2 feet examined).	56 (2 ft. examined).	85
2	Not exam.	6	3	43	52
3	1	11	18	20	50
4	1	None in ascend. col.	9 (mostly in ileum).	37 (mostly in jejun.)	47
5	1	3	7	23	34
6	None.	5 (also 4 non-comp.).	3 (mostly in ileum).	15 (mostly in jejun.).	23
7	,,	6	13 ,, ,,	None.	19
8	,,	None.	1	12	13
9	,,	1	3	7	11
10	5	None in ascend. col.	Not examined.	Not examined.	5
11	None.	,, None.	None.	3	3
12	,,	,,	,,	None.	
13	,,	,,	,,	,,	
14	,,	,,	,,	,,	
15	Not exam.	Not examined.	,,	,,	
16	,,	None in transver. col.	Not examined.	Not examined.	
17	,,	,,	None in jejunum.	None in jejunum.	
18	,,	,,	Not examined.	Not examined.	
19	,,	,,	None (2 ft. exam.).	None (2 feet exam.).	
20	,,	Not examined.			

The author's interesting observations show (1) that at birth the valves on the intestines, and especially on the large, are quite numerous in the human subject; (2) that in a few months the valves either disappear or become incompetent, with few exceptions; and (3) that in adults there are usually a few valves and these are more abundant in the small intestine, especially the jejunum.

Bertram C. A. Windle, M.A., M.D.

Poisoning by Artificial Mineral Water.—Between thirty and forty cases of poisoning were reported some time ago in Rendsburg, Germany. Inquiry showed that only those were poisoned who drank freely of Seltzer water, and an examination of this water revealed the fact that it contained a very appreciable amount of arsenic. The water was a manufactured product, and had been imported from another city.

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* Valves in the Veins of the Human Intestines. By W. S. Bryant, A.M., M.D. (*Boston Med. and Surg. Jour.*, vol. cxix. No. 17, p. 400.)

SURGERY.

RECENT PAPERS.

1124. Billroth.—On Scirrhus of the Thyroid Gland. (*Wiener med. Wochensch.*, No. 20, 1888.)

1125. Rochet.—On Trophic Disturbances after Resections of Joints. (*Revue de Chirurg.*, No. 5, 1888.)

1126. Bruns.—On the Curative Action of Erysipelas on Tumours. (*Beiträge zur klin. Chirurg.*, Band iii., Heft 3.)

1127. Hertzberg.—On the Operative Treatment of Hydrocele. (*Beiträge zur klin. Chirurg.*)

1128. Bullard.—On an Instance of Cerebral Surgery.

1129. Otis.—On the Use of the Electro-cystoscope in the Diagnosis of Tumour of the Bladder. (*New York Medical Record*, May 5.)

1130. Walzmann, Professor.—White Moss as a Surgical Dressing Material. (*Voënno-Sanitarnoïe Dëlo*, No. 8, 1888, p. 107.)

1131. Drobner, Dr. Emil.—Case of the So-called Surgical Scarlatina. (*Wiadomosci Lekarskie*, No. 11, 1888, p. 329.)

1132. Mercaut.—Treatment of Hydatid Cysts. (*Il Siglo Medico*, April 1888.)

1133. Gritti.—New Operation for Excision of the Os Calcis. (*Gazzetta degli Ospitali*, April 22, 1888.)

1134. Penetrating Wound of Abdomen : nearly Complete Division of Colon, &c. : Recovery. (*Revista de Med. y Quirurg. Practicas*, March 1888.)

1135. Fenwick.—On a new Method of Drainage in Suprapubic Cystotomy. (*Illustrated Med. News*, September 1888.)

Art. 1124. *Billroth on Scirrhus of the Thyroid Gland.*—In a contribution to the *Wiener med. Wochensch.*, No. 20, 1888, Dr. Billroth, of Vienna, alludes in the first place to cases he has seen from time to time of hard, nodulated indurations, deeply seated in the neck, between the larynx and the œsophagus, and interfering with respiration and deglutition. These indurations were not regarded as special tumours, but gave the impression that they were due to shrivelling which had taken place, without any apparent cause, in the connective-tissue, lymph-glands, or thyroid body. In most of these cases it was noticed that the induration corresponded in form and situation to one half of the thyroid body, although it could not be determined with certainty that this organ was the seat of the disease. Quite recently, however, Billroth has had under notice two similar cases, in which, on operating for the relief of serious constriction of the œsophagus and trachea, he was able to make out that the induration was due to a scirrhous process in the thyroid gland entirely analogous in its anatomical conditions to an atrophic or cicatrising scirrhus of the breast. These two cases are reported here at full length, as, so far as Billroth is aware, such a morbid condition of the thyroid gland has hitherto failed to be recognised. In the first of these instances the patient recovered after the removal of the left half of the gland, but, at the time of the last report, was suffering from relapse. The subject of the second case, a woman aged 26, died very soon after the operation from the effects of bleeding, and, it is supposed, of the entrance of air into the circulation through an orifice in the left innominate vein. The subsequent examination in each of these cases, of the extirpated hard growth proved, as was evident during the operation, that it consisted in scirrhus of the thyroid gland. The structure was of almost cartilaginous hardness, and creaked under the knife; only at the periphery of the removed mass were small portions found of still recognisable glandular tissue. Most of the growth was composed of firm fibrous tissue, resembling that of an old scar, studded here and there with traces of degenerated gland-vesicles. Here, as in cases of cicatrising scirrhus of the breast, the question presents itself whether the morbid condition be a true new growth or a chronic inflammatory process. In the mammary disease there is, according to Billroth, a malignant growth, for at the periphery of the hard deposit he has repeatedly found undoubted epithelial proliferations, which, however, speedily undergo granular degeneration, and are replaced by firm cicatricial tissue. The observations of the above described scirrhus of the thyroid glands have, as yet, been too few to permit of any definite conclusions as to its true nature. All that Billroth can say now is that the thyroid growth, in consequence of the extreme firmness of the indurated tissue, cannot be compared with the products of scirrhous processes in the liver and kidney. The occurrence of infection of the lymph-glands in one of the cases reported by Billroth is in favour of the cancerous nature of the thyroid disease. The morbid condition of the thyroid gland described in this paper is characterised at an early stage by radiating pains in the neck and by difficulty in breathing and swallowing. Before the appearance of any swelling in the neck, deep-seated induration may be felt in the thyroid gland, but whether such induration be due to a circumscribed deposit or to infiltration of the whole of one half of the gland, Billroth has not been able to make out. The prognosis, in cases of this kind, is very unfavourable, as the morbid process leads to constriction of the trachea and œsophagus. The only suitable treatment is early extirpation, which, considering the nature of the disease, is not unlikely to result in radical cure.

1125. *Rochet on Trophic Disturbances after Resections of Joints.*—The following conclusions are given in a paper by Dr. V. Rochet, of Lyons, on the Pathology, Evolution, and Treatment of certain Trophic Disturbances, observed after Articular Resection (*Revue de Chirurg.*, No. 5, 1888). 1. Trophic disturbances of different kinds, and affecting the skin, the muscles, the vessels, and the temperature, have been observed in the corresponding limb after resection of a joint. 2. Some of these disturbances are serious, and compromise more or less the utility of the limb ; others are less severe, and for the most part curable. The former have been observed after traumatic resections in military practice, and, speaking generally, after resections effected by imperfect operative procedures, and accompanied by serious technical faults ; the latter occur only after well-performed sub-periosteal resections practised in cases of disease. 3. Trophic disturbances may occur after other plans of treatment, as immobilisation associated or not with counter-irritation and amputation. 4. A well-performed resection is not in itself responsible for the occurrence of these disturbances. Most of these existed before the operation, and are the results of the primary lesions, whether osseous or articular, which necessitated operative interference. 5. The trophic disturbances are to be attributed to two main causes : (*a*) immobilisation of the limb, particularly when effected by bandaging ; (*b*) direct or reflex influence of the nervous system. 6. These disturbances undergo, in the long run, a different evolution, accord-

ing to the nature of the case and the two forms of resection (traumatic and pathological). It would seem on first consideration that the results ought to be better after all traumatic resections, because, apart from the operation, the vitality of the limb had not been impaired in consequence of antecedent lesions. This is really the case when the injury has not caused too much disorder, and when the resection has been properly performed; but frequently, as has been proved by Gurlt, important arteries and nerves have been divided by the original injury, the surgeon has committed serious faults in his operation, or the after-treatment, so important in such cases, has not been properly carried out, and that consequently incurable trophic disturbances have been developed. After a well-performed resection for disease such deplorable results do not occur; on the contrary, the operation has on such cases a most favourable influence. Muscular atrophy, the importance of which is so great with regard to the future utility of the limb, and on which most of the other troubles depend, is very much ameliorated by the operation unless this condition is too far advanced in consequence of the influence of lesions that existed before the operation. 7. This favourable result of resection performed under the above-mentioned conditions is due to the fact that such an operation removes the two causes of the trophic disturbances; it arrests the inflammatory phenomena and restores the functions of the limb. 8. This last result will be much aided by careful after-treatment and particularly by willing co-operation on the part of the patient. Methodical exercise of the joint and repeated active movements will do much more than electric currents, massage, and rubbing, which, however, are useful auxiliary means.

1126. *Bruns on the Curative Action of Erysipelas on Tumours.*—In his *Beiträge zur klinische Chirurgie*, Band iii., Heft 3, Professor Bruns, after reference to the numerous instances that have been recorded of disappearance or diminution in size of a new growth (usually of a malignant nature) after an intercurrent attack of erysipelas, discusses the question whether it be justifiable or not to attempt to remove a cancerous tumour beyond the reach of any operative treatment by the artificial production of this eruptive disease. A report is given of a case observed by himself of complete and permanent removal of a recurrent melanotic sarcoma of the breast after spontaneous erysipelas; and an analysis is given of twenty-two cases, including this, in which the development of tumours was more or less influenced by like attacks. In six of these cases—three of sarcoma, two of cicatricial keloid, one of nasal polypus—the growths were completely removed, and did not recur; in most of the other cases the growths became much smaller under the influence of attacks of erysipelas, but subsequently resumed their previous activity of growth. This influence of erysipelas on the growth of tumours is attributed to its general action on the system, especially to the accompanying high fever, rather than to any local and direct action on the elements of the neoplasm. Artificial production of erysipelas, Bruns states, is justifiable only in cases of rapidly growing malignant tumour threatening life and defying all other methods of treatment. It is by no means an easy matter, however, to set up erysipelas artificially, either by attempts at direct transmission from man to man, or by the inoculation of pure cultures of 'erysipelas cocci.'

1127. *Hertzberg on the Operative Treatment of Hydrocele.*—The last number of Professor Bruns's *Beiträge zur klinische Chirurgie* contains a paper on the 'Operative Treatment of Hydrocele and its Ultimate Results,' in which Dr. Hertzberg, of Tübingen, endeavours to prove the superiority of incision over injection by a record and analysis of forty-six cases, in which Volkmann's radical operation was performed. The youngest patient was 12 years of age, and the oldest 56 years; in six cases the hydrocele affected both sides of the scrotum. The operation in each case was performed with full attention to antiseptic details. The vaginal cavity was washed out with a weak solution of corrosive sublimate; a drain-tube of medium size was passed through the cavity, and brought out through a counter-opening at the lower part of the scrotum, and the seat of operation and the surrounding parts were finally covered by a dry dressing of wood-wool. Professor Bruns practises partial excision of thickened indurated or superfluous tunica vaginalis, but holds that total excision of this membrane is not required, save in very exceptional cases. Care was taken to relieve the vaginal cavity of all products that were supposed to be associated with the disease, and in cases where such morbid conditions existed, deposits and growths were removed from the tunica vaginalis, and hydatid and other cystic growths from the testis or epididymis. In thirty-three cases recovery took place without any signs of local or general reaction. In eight cases there was severe general reaction with subjective disorder and prolonged fever. Such conditions which, however, are now but very rarely observed, are the result of interference with primary healing by effusion of blood into the vaginal cavity, of inflammatory œdema of the scrotum, of swelling of the testis, or of suppuration in the perineum or the anterior abdominal wall. In a large majority of the cases collected by Hertzberg the drain-tube and sutures were removed on the fifth or sixth day, and the patient was able to leave his bed at the end of the first, or the beginning of the second, week. The average duration of the stay in hospital was a little over sixteen days. In this respect Volkmann's operation seems at first sight to compare unfavourably with injection of iodine. The usual duration of hospital treatment by the latter method is from eight to ten days, but, it is pointed out, injection is very often followed by tenderness and swelling of the scrotum and effusion into the vaginal cavity, which may last for weeks, and even for months. All the patients treated by incision and drainage at Tübingen were discharged as cured, and the primary results were all very favourable. By subsequent inquiry and observation Hertzberg has made out that the benefits derived from the treatment have been maintained and that 45 out of 47 hydroceles treated by cutting operation have been permanently cured. By comparing tables, derived from different sources, of carefully-recorded and long-observed cases of hydrocele treated by incision and injection, he finds that the relapses after the former treatment constitute from 3 to 4 per cent. of the total number of cases, whilst those after treatment by puncture and injection of iodine amount to 8 per cent. In conclusion, Hertzberg expresses it as his opinion that incision is the most rational method of treating hydrocele, especially with regard to the certainty of obtaining a permanent cure, and that in future it will be more frequently practised, as the apprecia-

tion of the value of antiseptic surgery becomes more widely spread.

1128. *Bullard on an Instance of Cerebral Surgery.*—In a report of a case of acquired spastic hemiplegia treated by double trephining, which was read before the Suffolk (U.S.) District Medical Society in January, Dr. W. N. Bullard gave the full clinical history of a boy, four and a half years old, whose intelligence when he first came under the author's notice in June 1887, was very feeble, who was unable to speak and to use any of his limbs well, and had right internal strabismus and right spastic hemiplegia. In addition there was a well-marked cicatrix and depression in the right posterior parietal region, supposed to have been caused by the forceps during delivery. There had not been convulsions at any time. The patient, having been put under the influence of ether, Dr. Bradford of Boston trephined first on the right side of the head, directly over the cicatrix, the trephine being an inch in diameter. The outer table of the portion of bone removed showed a fracture, and the inner a slight inequality due to a fissure. The dura mater was thickened, but the subjacent portions of pia mater and brain appeared quite normal. At the suggestion of Dr. Bullard the trephine was applied over the probable seat of the lesion on the left side, at the juncture, as far as could be determined, of the middle and lower thirds of the fissure of Rolando. On the removal of a disc from the perfectly healthy bone, a depression in the brain-substance—porencephalic cavity—was exposed. This not only occupied the whole space directly under the opening, but also extended somewhat anteriorly. The brain-substance around this depression, which was estimated at about 1½ inches long and ¾ of an inch wide, was puckered and shrivelled. The patient never rallied thoroughly, and died about seventeen hours after the operation. In his comments on this case Dr. Bullard states that it demonstrates the possibility of localising porencephalic lesions in children in certain cases. He is convinced that such morbid conditions of the brain can be localised with sufficient accuracy for all practical purposes in a large proportion of the cases of this class. Secondly, this case, it is held, may be accepted as evidence that these lesions, or at least many of them, can be reached by surgical operation without serious difficulty, since simple trephining can no longer be regarded as a serious operation in subjects of ordinary health. This case well illustrates the fact that, in spite of a fracture or visible injury on one side, the actual cerebral lesion may be on the opposite side, whether produced by direct violence or by contrecoup. Therefore, Dr. Bullard points out, if in case of cerebral injury the symptoms point to a lesion on the side opposite to that of the injury; for example, if the hemiplegia be on the same side as the fracture of the cranium, the surgeon should not trephine at the place of fracture, but on the other side.

1129. *Otis on the Use of the Electro-cystoscope in the Diagnosis of Tumour of the Bladder.*—Dr. F. N. Otis has recently reported (*Medical Record*, May 5) a case in which a papillomatous tumour of the bladder was demonstrated by means of Leiter's electro-cystoscope. The diagnosis was confirmed by subsequent inspection through suprapubic cystotomy, and the growth was successfully removed. The patient was a man, aged 23, who for two years before he was first seen by Dr. Otis had suffered from attacks of frequent and painful micturition, each coming on without apparent cause, and lasting for a week or longer. During the intervals, often lasting for several weeks, the patient had remained free from trouble. There had not been any urethral discharge, but the urine had been occasionally tinged with blood. At his first examination of this case, Dr. Otis found that the urine was slightly but distinctly blood-stained, and that it contained some small clots as well as some pus and mucus. The bladder was then irrigated gently with a saturated solution of boric acid until the fluid returned clear. The catheter was then withdrawn, leaving about four ounces of the solution, of a temperature of 80°, in the bladder, as a preparation for its examination by the electro-cystoscope of Leiter. The required current was furnished by the small six-cell battery of the Galvano-Faradic Company. The cystoscope was then introduced into the bladder, and the current turned on. The illumination was complete. Through the slight rosy medium the small blood-vessels of the mucous membrane of the bladder were distinctly seen. On the right side a deep red, granular-looking mass with a wavy outline was then distinctly observed, covering about one-fourth of the cystoscopic field, which mass was regarded as a papillomatous growth to some extent covered by coagulated blood. On March 19 the patient was operated upon by Dr. L. B. Bangs. The high operation was performed, and, the bladder being examined by means of an electric light introduced through the suprapubic incision, the diagnosis made by the cystoscope was verified in every particular. The growth was then removed, as far as possible, with the scissors, and the surface cauterised with the Paquelin cautery. The patient made a satisfactory recovery. In his concluding remarks on this case, Dr. Otis states that there can be no question as to the great prospective value of the electro-cystoscope in the diagnosis of many difficulties to which the bladder is subject. A variety of foreign bodies have already been reported as made out by the use of this instrument, and the locality, size, and colour of vesical calculi have been frequently demonstrated. In one instance two stones were seen when only one had been previously found; but this, of course, might with care have been made out by means of the lithotrite. But it is in the diagnosis of tumours and encysted or impacted calculi that the most essential service may be anticipated from the use of the cystoscope. The orifices of the ureters are quite readily brought into the cystoscopic field, and it is more than probable that (perhaps through the introduction of some clear fluid with which blood does not readily mingle—glycerine, for instance) the true source of a previously doubtful hæmaturia may be demonstrated. W. Johnson Smith.

1130. *Walzmann on White Moss as a Surgical Dressing.*—Professor Walzmann, of Helsingfors, highly eulogises (*Voënno-Sanitarnoië Dëlo*, No. 8, 1888, p. 107) white moss, recommended as a material for surgical dressing by Professor Schede. The species *Sphagnum cuspidatum*, *S. cymbifolium*, *S. squarrosum*, and *S. acutifolium* are said to be the best of all. The material is highly hygroscopic; 50 grammes of the moss absorb 170 grammes of fluid without yielding a single droplet on strongest pressure. It is exceedingly light, elastic, cheap, and easily accessible, especially in northern countries. In his country practice Professor Walzmann

uses, with best results, a freshly gathered moss, without any preparatory sterilising treatment. The only drawback is the great bulk of the dressing; nor can it be conveniently fitted to the parts in some regions of the body. To be well adapted for use the material should be prepared as follows:—Freshly-gathered moss is spread in thin layers and dried under open sky, in some place free from dust. When dry, it is carefully freed from any fragments of tree branches, leaves, fir needles, mosses of other varieties, &c. With this sorted material, bags varying in size, but invariably 4 centimètres thick, are stuffed, to be subsequently dipped in a sublimate corrosive solution (1 to 1,000), and then to be preserved in wooden chests with a lid, and lined with a layer of asphalte 1 centimètre thick. One or two pads of this kind are employed for each dressing. They are placed either immediately over the wound or with an intermediate layer of some sterilised thin tissue. If the pad be found excessively dry, it should be previously slightly moistened, in order to increase its elasticity and absorbent power.

1131. *Drobner on a Case of Surgical Scarlatina (Toxic Erythema).*—In the Polish *Wiadomosci Lekarskie*, No. 11, 1888, p. 329, Dr. Emil Drobner, house-surgeon to the Krajowy Spital Powszechny, in Lvov, details a case of the so-called 'surgical scarlatina' of British authors, to which Dr. Albert Hoffa called the attention of continental practitioners a twelvemonth ago (*vide* the London Medical Record, August 1887, p. 342). A maid-servant, aged 16, was admitted with caries of the left femur, and underwent necrotomy six days later. A 3 per cent. solution of carbolic acid, and, later on, a sublimate corrosive lotion (1 : 1,000) were employed during the operation (for washing out the wound). On the next day, the morning temperature rose to 38°·5 C., to reach 40°·5 C. in a couple of hours. On examination, her neck, breasts, abdomen, and knees were found to be profusely covered with a bright-red punctiform rash, closely resembling common scarlatina. No changes whatever were detected about any visible mucous membranes. About the fourth day after the operation the temperature returned to the standard, while the rash (somewhat abruptly) became considerably paler. It disappeared completely, though not before the eighth day. The wound, when examined on the third day, looked perfectly well; it healed kindly in due time. There was no rash in its neighbourhood. 'Surgical scarlatina, variety toxic erythema' (according to Hoffa's scheme), was diagnosed from the very beginning by Drs. Drobner and Ziembicki; the cause being, probably, the use of corrosive sublimate. V. Idelson, M.D.

1132. *Mercaut on Treatment of Hydatid Cysts by Ox-gall Injections.*—Dr. D. Juan Mercaut reports a case of hydatid cyst in the thigh, which re-formed after an incomplete removal. It was of the size of an egg, and was too adherent to admit of removal. It was opened and washed out with the contents of three ox-gall bladders, diluted with an equal quantity of water. This produced a destruction of the cyst-wall, and a speedy cure.

1133. *Gritti on a New Operation for Excision of the Os Calcis.*—Gritti describes (*Gazzetta degli Ospitali*, April 22, 1888) and illustrates a new method of removal of the os calcis, in which the sole of the foot is left intact. He makes a horseshoe incision round the os calcis from the outside, at its articulation with the cuboid to the corresponding point on the inner side of the foot (or *vice versâ*), dividing everything down to the bone, and leaving intact the structures passing behind the inner ankle. The flap is turned forward, and the great tuberosity is sawn through below the attachment of the tendo Achillis. The condition of the bone can then be ascertained, sequestra removed, &c. If it is necessary to remove the whole bone it can now be done easily by means of a gouge and raspatory. If the articular cartilages of the calcaneo-cuboid and calcaneo-astragaloid joints be intact they should be left.

1134. *Case of Penetrating Wound of the Abdomen with Extrusion of the Intestines and Almost Complete Division of the Colon.*—The *Revista de Medecina* reports a case recorded in *El Genio Medico Quirurgico*, in which recovery followed an operation for suturing the large bowel after it had been so nearly cut through that the two parts were only just held together by a bridle of tissue. The abdominal wound was inflicted in a quarrel, and was about 3½ inches long, dividing the ninth and tenth costal cartilages. The whole of the small intestine is said to have been extruded, but it was uninjured. The ends of the colon were joined by eight or ten points of silk suture, and returned into the abdomen, and the abdominal wound was closed, except where a tent was inserted, in the absence of a drainage-tube. On the following day the patient was moved from the farm-house, in which he was wounded, to the hospital, and for the next few days had feculent vomiting. The wound was opened up, and gas and fæces escaped from the colon. When an artificial anus was thus established, he went on well. On the twelfth day flatus passed *per anum* and fæces on the twentieth day. The aperture in the colon gradually closed and was soundly healed without surgical interference in one year and eight months.

Walter Pye.

1135. *Fenwick on a new Method of Drainage in Suprapubic Cystotomy.*—In the *Illustrated Med. News*, September 1888, p. 2, Mr. Hurry Fenwick describes a new plan he has successfully tried in procuring efficient drainage, in cases of suprapubic cystotomy, where the patient is enfeebled by age or disease, and is liable to eczema or bed-sores from the continual soakage of the overflowing urine. The bladder is kept perfectly dry by means of slight suction (after the fashion of a Sprengel pump). An irrigating can is placed upon a chair by the patient's bedside, and its tube, with a clip attached to regulate the overflow, is dropped into a chamber under the bed. The drainage-tube from the bladder is connected with the tube from the can, at an acute angle. A continual driblet of water from the reservoir falling into the chamber sucks the urine from the bladder as fast as it collects, and the patient is kept perfectly dry. Of course this plan would not answer if there be much mucocystitis or blood present. The author met with complete success in the case of an old man, aged 77, from whom he removed a stone 2 inches by 1½ inches in diameter. The case did well for a week, but a good deal of urine oozed out of the wound by the side of the tube, causing most distressing symptoms, which were at once relieved by using the suction apparatus.

Richard Neale, M.D.

A Russian medical man is about to found a farm near St. Petersburg for the express purpose of furnishing milk deprived of micro-organisms by sterilisation, for the exclusive use of hand-fed babies.

MEDICINE.

RECENT PAPERS.

1136. Bull, Dr.—On Stomach Cough. (*Deutsche med. Zeitung*, No. 68, 1888.)

1137. Berényi.—On Remarkable Effect of Iodide of Potassium in a Case of Aortic Aneurism. (*Gyógyászat.*)

1138. Landerer, Dr. A. (Leipsic).—A New Method of Treating Tuberculous Affections. (*Wiener med. Presse*, No. 42, 1888.)

1139. Bucquoy, Dr.—On Ergot of Rye in the Treatment of Polyuria.

1140. Sokolowski, Dr. Alfred.—On the Curability and Treatment of Laryngeal Phthisis. (*Wiadomosci Lekarskie*, July 1888, p. 26.)

1141. Murray-Gibbes.—On the Cure of Diphtheria. (*Australian Med. Jour.*, July 1888.)

1142. Smith, G. M.—On Increased Death-rate from Pneumonia and One of the Essentials in its Treatment. (*New York Medical Record*, Oct. 20, 1888.)

1143. Smith, Shingleton.—On Treatment of Phthisis by Injections of Carbolate of Camphor. (*Bristol Med.-Chir. Jour.*, September 1888.)

1144. Robin, Dr.—On the Albuminuria of Variola. (*Rev. de Thérap.*, Oct. 15, 1888.)

Art. 1136. *Bull on Stomach Cough.*—The *Deutsche med. Zeitung* gives the following from an article in the *Deutsches Archiv für klin. Med.* (vol. 41, parts 4 and 5), on stomach cough, by Dr. Bull, who is chief physician of one of the medical divisions of the Royal Hospital in Christiania. Stomach cough is, for the modern physician, an antiquated idea. Yet the more recent inquiries have determined the most diverse parts of the body as the sources of the cough; thus the larynx, the nose, the bronchi, the pleura, the œsophagus, the intestine, the liver, the spleen, and the female genital organs are all mentioned as the possible sources of the cough. Why not, therefore, also the stomach? asks Bull. After collating the opinions of authors on the subject, he finds that they all agree in admitting the possibility of such an origin, but consider such a reflex process to be extremely rare. In the Christiania hospital Bull treated a young woman, aged 24 years, in whom the symptoms could be explained only on the hypothesis that the cough arose from the stomach. The patient was anæmic, and the dry and very violent cough could not be allayed by either chloral or morphia. Apart from a rather less intensive sound in the right lung apex, there were no indications of any other disease but gastric affection. Pressure on the epigastrium invariably brought on the cough. Bull cured the latter through stomach treatment. He applied cataplasms externally, and gave four times daily 3 grammes of bismuth in 100 grammes of lukewarm water. After the first powder, the cough abated and disappeared altogether. When, after some time, the cough recurred, it yielded at once to the same treatment. In his epicritical remarks, Bull excludes in this case the possibility of the cough having been caused by other factors, and believes he is correct in seeking its source in the stomach. Perhaps the irritation was caused by the cicatrices of a healed gastric tumour (the patient had formerly vomited blood) and by eventual adhesions to the neighbouring parts. As the just-commencing menstruation suddenly ceased when the cough began, the idea suggested itself of vaso-motor and nervous disturbance; yet when all the symptoms were considered together, the probability was that the seat of irritation lay in this case in the stomach.

1137. *Berényi on Remarkable Effect of Iodide of Potassium in a Case of Aortic Aneurism.*—The following is an abstract from a report in *Gyógyászat*, by Dr. Berényi, of Gran. An official, aged 54 years, had a sudden attack of hoarseness. A specialist pronounced the cause to be rheumatic paralysis of the left vocal chord, but electric treatment, lasting six weeks, had no effect. In fact, the nightly attacks of suffocation grew worse, and swallowing became very difficult. Another doctor recognised the disease as aortic aneurism. When the patient came to Berényi, after two months of unsuccessful symptomatic treatment, he was greatly emaciated, and had a moderate œdema on the knuckles. In the sternal region, corresponding with the second and third left ribs, there was a dull percussion sound, and in the fossa jugularis active pulsation. The heart-sounds were clear. Following the recommendation of English authors, Dr. Berényi gave daily 1·80 grammes of potassium iodide. The improvement during the following months was striking; the asthmatic attacks disappeared, as well as the difficulty in swallowing, whilst the hoarseness grew less, and the dulness decreased. At the same time the patient increased in weight. Berényi intended to continue the medicine as long as the system tolerated it. After 170 grammes had been given there were yet no indications of iodism. John Elliott.

1138. *Landerer on a New Method of Treating Tuberculous Affections.*—The object being to cause cicatrisation by inflammation artificially caused, the author, after trials of many things, has fixed upon Peruvian balsam. Sayre's remarkable success with this in spondylitic abscesses induced the author to try it. Applied as a plaster to tuberculous ulceration of glands, Peruvian balsam, though having no action at a distance, causes rapid healing. Internal tuberculous foci were injected by the author with the balsam in the following form:—℞ Bals. peruv., muc. gum. arab., āā 1·0, ol. amygd. q.s. ut fiat emulsio subtilissima, sod. chlor. 0·7, aq. dest. 100·0. This emulsion was used in parenchymatous and intravenous injections. In 51 cases the balsam was used. In 16 the glands were affected, and the balsam was applied as a plaster; any fistulæ were injected with the balsam in ether, or packed with gauze saturated with balsam; treatment lasted four to twelve weeks, and permanent cure was obtained. Two cases of fungoid ulceration were cured by division, scraping, and packing as before. Twenty-nine cases of bone-disease included 2 of the spinal column, 1 psoas abscess, and 1 lumbar abscess (the former was injected with the balsam in ether, the latter was plugged), and 3 of the hip-joint; all cured. The other cases are given all cured or greatly improved at the time of writing. The lung cases were 4, 2 being far advanced, and these were greatly improved by intravenous injections (1·0 gramme twice a week). Two slighter cases were cured. Bladder-tuberculosis was cured by two injections (10 cubic centimètres of a 2·5 per cent. emulsion). The patient is at work three years afterwards. The above-mentioned emulsion is thus used. Five or ten drops are poured into a porcelain capsule, and a 0·7 per cent. solution of NaCl (filtered and made alkaline by a drop of caustic soda) is added drop by drop till the emulsion is made feebly alkaline, the yellowish-grey emulsion taking a greenish tint. The

whole is strained through linen, and is now ready for use. For intravenous injections each specimen must be examined microscopically, and, if fat-drops larger than red corpuscles be found, must be rejected. The diluted emulsion only lasts a few hours, but the concentrated keeps for weeks. Parenchymatous injections are made deep to the bone, or into the distended articular cavity, or into fungoid masses; the quantity is usually from half to one cubic centimètre. The injection is painless, or nearly so. Intravenous injections are made by a fine cannula into a vein of the arm after its distension has been caused by a bandage applied higher up the limb rather loosely. If a little swelling arises as the injection is gently made, the cannula is not in the vein, and had better be withdrawn and inserted somewhere else. The quantity must not exceed 1 cubic centimètre. This treatment is not warmly advocated by the author in cases of pulmonary tuberculosis which are far advanced.

E. J. Edwardes, M.D.

1139. *Bucquoy on Ergot of Rye in the Treatment of Polyuria.*—The following remarkable results have been obtained by Dr. Bucquoy with ergot of rye in a case of simple polyuria. The patient was a man of robust constitution, who, after being nearly drowned five years ago, showed symptoms of polyuria and of severe polydipsia. After treatment with valerianate (?) during five months he recovered. At the beginning of 1888 polyuria reappeared. The affection was determined by violent grief. The patient passed from 9 to 14 litres of urine in the twenty-four hours. The density of the urine was 1,004; its reaction was slightly acid; it contained neither albumen nor sugar, but 3·93 grains of urea per litre. M. Bucquoy administered 75 centigrammes of ergot of rye on the 14th of the month. The quantity of urine passed daily was then 14 litres. On the 15th it was reduced to 11 litres; on the 16th to 7 litres; on the 19th to 7 litres; on the 20th M. Bucquoy reduced the dose of ergot to 50 centigrammes; the urine continued to diminish. On the 30th of the same month the treatment was suspended, but the quantity of urine diminished progressively. When the patient left the hospital he only passed from 1½ to 2 litres in the twenty-four hours. M. Bucquoy has observed the excellent effects of ergot of rye in other cases of polyuria of nervous origin. He has never obtained notable results with valerianate (?) even in large doses in the treatment of this affection.

W. Vignal.

1140. *Sokolowski on the Curability and Treatment of Laryngeal Phthisis.*—In the Polish bi-weekly *Wiadomosci Lekarskie*, July 1888, p. 26, Dr. Alfred Sokolowski, house-physician to the Hospital of the Holy Spirit in Warsaw, publishes a very able paper on the subject, based upon extensive observations of his own. The gist may be summarised as follows:—1. Laryngeal phthisis represents a curable affection, though cure is but rarely relatively observed. Dr. Sokolowski himself, however, has met as many as ten cases of an actual permanent cure, in six of which recovery took place spontaneously, and in the other four under the influence of a local treatment. In every one of the cases there existed simultaneously pulmonary phthisis of a fibroid variety with fairly mild local symptoms, while the patients' general state was pretty satisfactory, fever, sweats, &c., being absent. Nearly all of them lived in good hygienic and dietetic conditions, while a majority of them, in addition, had been repeatedly subjected to a climatic treatment. 2. Laryngeal phthisis can be most decidedly relieved or cured by a duly selected systematic local treatment, as the author's comparative experiments on hospital patients have proved. Of fifty cases, left without any local treatment, in only eight (16 per cent.) some amelioration was observed; but the remaining forty-two (84 per cent.) showed no improvement. Meanwhile, of fifty cases, treated by various local means (side by side with the general ones), in as many as forty (80 per cent.) an improvement was obtained, and only ten (20 per cent.) remained in *statu quo ante* or grew worse. 3. The best results are obtained from the so-called 'combined method'—that is, from a combined use of lactic acid, surgical measures (scraping out with a curette, pinching out granulations with a pincette, &c), and galvano-cautery. Lactic acid alone was used in twenty-four cases, of which fifteen improved (seven 'subjectively,' eight 'objectively'), while nine showed no amelioration. The 'combined method' was resorted to in sixteen cases, of which only one proved a failure, while the remaining fifteen improved (two 'subjectively,' thirteen 'objectively'). A general (dietetic, climatic, &c.) treatment must go parallelly with the local one, since laryngeal morbid changes vary in an intimate connection with the pulmonary ones and the patient's general state. [It would be very interesting to hear from Dr. Sokolowski something about the menthol treatment of laryngeal phthisis, to which Dr. Albert Rosenberg's recent striking communication has forcibly drawn attention everywhere. *Vide* the London Medical Recorder, October 1888, p. 432.—*Rep.*]

V. Idelson, M.D.

1141. *Murray-Gibbes on the Cure of Diphtheria.* In the *Australian Med. Jour.*, July 1888, p. 309, Dr. Murray-Gibbes states that the constant blue-gum steam treatment will cure diphtheria in all its forms. The author simply keeps his patients night and day in an atmosphere of blue-gum steam, *i.e.* the oil of eucalyptus globulus. The steam must be constantly applied; it is no good using it unless it is applied right through the attack. Patients, breathing an atmosphere charged with it for a week, are not weakened, notwithstanding the depressing effects of the diphtheria poison. The oil of eucalyptus is not only an antiseptic, but it has a peculiarity which makes it most suitable for the treatment of diphtheria in that, if taken into the stomach, it reappears in the secretion of the glands of the throat. It disinfects the membranes and the discharges from the mouth and throat in a very short time. Children never object to this treatment, playing under their tents with their toys, and are able to take plenty of nourishment during the whole duration of the attack. The tent is made by placing an open umbrella over the bed with a sheet spread over it, and, as a rule, the disease seldom spreads when treated in this manner. The author believes that the infection is strongest after the throat is free from the membrane.

Richard Neale, M.D.

1142. *Smith on Increased Death-rate from Pneumonia and One of the Essentials in its Treatment.*—Dr. Gouverneur M. Smith presents a table of the mortality from lobar pneumonia in New York City during the last ten years, from which it appears that the most fatal months are those of the late autumn and spring, March being as a rule the worst, and that a steady increase has taken place in the death-rate. In discussing the apparent failure of curative

methods to keep up with this increased severity of disease, the writer points out the weak points of the antipyretic treatment, and lays especial stress upon the necessity for maintaining a good supply of fresh air. He compares the patient with acute pneumonia with a healthy person in whom a large proportion of lung surface has been rendered unfit for service by the introduction of a plug, and shows that in both cases the work of respiration must of necessity be thrown upon the remaining healthy area, and that recovery from pneumonia mainly depends upon the efficiency with which this extra work is performed during the interval which must elapse before the consolidated lung becomes once more capable of respiration. The addition to the respired air of chemically prepared oxygen or ozone will not efficiently take the place of pure atmospheric air. The patient must, therefore, be placed under conditions which will ensure a due supply of fresh air, and the demands upon his respiratory powers must be reduced as low as possible. In estimating the required supply of fresh air to any enclosed space, the number of attendants or others who may have to be present must be taken into account.

1143. *Smith on Treatment of Phthisis by Carbolate of Camphor.*—Dr. R. Shingleton Smith records two cases of phthisis treated by subcutaneous and intra-pulmonary injections of carbolate of camphor. Both cases improved greatly under the treatment. The injections consisted of ten, fifteen, or twenty minims of a saturated solution of camphor in carbolic acid, and were at first administered subcutaneously, and afterwards into the lung-tissue about the diseased areas in the apices. The latter gave rise to no sign of lung irritation, and the subcutaneous injections produced slight smarting only. These were given at first every second or third day, but afterwards daily, and about fifty injections in all were used in the course of ten weeks, in the first case. In the second, the whole quantity injected in twenty-five days amounted to 245 minims, 60 minims having been diffused in the diseased tissues in the apex of the right lung. The intra-pulmonary injections were preferred by one of the patients, as they 'did not hurt so much as the subcutaneous ones.' A slight rise of temperature was observed after the injections in one or two instances, but no other evidence of irritation was noticed. E. Clifford Beale, M.B.

1144. *Robin on the Albuminuria of Variola.*—From a symptomatological point of view there are four varieties of albuminuria in variola:—1. The pre-variolic albuminuria, serious when marked and when fatty casts are found in the urinary sediment. 2. The ephemeral albuminuria, which occurs at the beginning of the eruption or during suppuration, is without any diagnostic value. 3. The marked albuminuria, which may supervene at any period of the acute stage, and is in proportion to the gravity of the attack. It is not common, but when it does occur it is of serious import. 4. The albuminuria of convalescence really comprises two sub-varieties: the first accompanies or precedes the febrile attacks of convalescence, due to complications, abscess, &c. This sub-variety is transitory, scanty, and of no serious import; the second is analogous to post-scarlatiniform albuminuria, and, like it, is dependent on variolic nephritis. It is less frequent than after scarlet fever, and is only met with after severe cases. It appears to be referable to the bad general condition of the patient, and is more often met with after twenty-one years of age in the male sex and in non-vaccinated subjects and is occasionally attributed to a 'cold.' Alfred S. Gubb.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1145. Krauss.—On the Effects of Hyoscin. (*Med. Chirurg. Centralblatt*, No. 40, 1888.)

1146. Gilbert d'Hercoutt, Dr.—On Tartrate of Thalline in Blennorrhagia. (*Paris Médical*, Aug. 18, 1888.)

1147. Devine.—On Strophanthus in Heart Disease. (*Boston Med. and Surg. Journal*, Nov. 15, 1888.)

1148. Ellingwood.—On Chemical Food for Pregnant Women. (*Chicago Med. Times*, September 1888.)

1149. Eichhorst, Prof.—Myrtol as a Disinfectant of the Air-passages. (*Wiener med. Presse*, No. 42, 1888.)

1150. Sancerotte, Dr. Tony.—On the Use of Digitalis in the Treatment of Pneumonia. (*Rev. Gén. de Clin. et de Thérap.*, Oct. 18, 1888.)

1151. Beausse, M.—On the Preparations of 'Grey Oil.' (*Bulletin Médical*, Sept. 26, 1888.)

1152. Formula for Dysmenorrhœa.

Art. 1145. *Krauss on the Effects of Hyoscin.*—Dr. Krauss, of the Buda Pest Lunatic Asylum, gives facts to determine the therapeutic value of hyoscin and to remove misconceptions. Especially with regard to the fear of dangerous secondary effects, he offers as an explanation of such fear the fact that different untrustworthy preparations are used. Merck's hyoscin hydrochloride was used in Buda Pest subcutaneously in a 2 per mille solution, at first with a ½ Pravaz syringe, and afterwards in a 0·001 dose. Later an injection of 0·001 was given every morning and evening. In order to control the effect, the drug was at first injected during the day. No more pain was felt than from other injections, nor was any disagreeable effect observable either at the point of injection or elsewhere. Serious complications were conspicuous by their absence. The drug was applied in all kinds of irritative conditions, even in acute maniacal and hallucinatory irritability, in post-epileptic maniacal attacks and paralytic restlessness. The experiments have so far proved that hyoscin hydrochloride excels all other known similar drugs by reason of its remarkably sedative and hypnotic effect, the latter being exceedingly striking in acute maniacal, irritable conditions. In the case of paralytics, the effect is no longer so marked. The maniac collapses after the injection as if struck by lightning, while the paralytic calms down only gradually—nay, in some cases an amœno-maniacal condition sets in. The drug was used in cases where chloral, morphia, and paraldehyde had either failed entirely or had only had a very slight effect. In sleeplessness, too, hyoscin in 0·001 doses proved effectual. Slight vertigo and nausea are the precursors of a sleep lasting from five to six hours. Not a single symptom of intoxication occurred in ninety cases, and the circulation and respiration remained normal. Once only there was a passing tendency to vomit. Krauss cannot agree with Kühlwetter in the opinion that hyoscin may be given only to robust patients, for he has not found it to injuriously affect anæmic and debilitated patients. The drug has been given

in ten cases where there had been tabes and advanced paralysis for some years. The temperature is not at all affected by the drug. Sometimes the pupils become dilated, but not usually.

JOHN ELLIOTT.

1146. *Gilbert d'Hercoutt on Tartrate of Thalline in Blennorrhagia.*—Dr. Gilbert d'Hercoutt has obtained the following results in about forty cases of blennorrhagia with tartrate of thalline. He employed this substance in from 50 to 100 parts in a solution of naphthol, given in three injections daily, the syringe being one half or one third filled for each injection. Pain during micturition disappeared from the second day after the treatment was begun, and in some cases after the second injection. The discharge diminished rapidly, and disappeared between the fourth and sixth days. The treatment should be continued three or four days after the affection disappears; if suspended immediately afterwards, the morbid symptoms reappear. Dr. Gilbert d'Hercoutt considers that this method should be adopted in blennorrhagia at the outset. In long-standing blennorrhagia this method will not be found better nor worse than any other. W. VIGNAL.

1147. *Devine on Strophanthus in Heart Disease.* Dr. William Devine records his experience with respect to the therapeutic action of strophanthus in heart disease (*Boston Med. and Surg. Journal*), and arrives at the following conclusions:—Having used the drug in twenty cases, organic and functional, he has observed no disturbance of digestion and no cumulative effects, even after use, for two or three months. He finds the action beneficial, and quotes a few cases as samples, illustrating its successful use in mitral disease, bronchitis with cardiac weakness, fatty heart, and palpitation without definite lesion. In several cases strophanthin was used in doses of 100th or a 50th of a grain, and is recommended for cases where a quick action is desired. The average dose of the tincture of strophanthus is given as ten minims, which in some cases may be increased to twenty minims. E. CLIFFORD BEALE, M.B.

1148. *Ellingwood on Chemical Food for Pregnant Women.*—In the *Chicago Med. Times*, September 1888, p. 393, Dr. Ellingwood draws attention to the number of pregnant women who complain of headache, backache, toothache, pains in the limbs, &c., and records cases in which he has treated such with a course of Parrish's chemical food. This formula contains phosphate of calcium, phosphate of magnesium, phosphate of potassium, and phosphate of iron, besides other ingredients. It supplies both the mother and child with the chemical substances so often deficient, and not only improves the mother, but the child, when born, is strong and healthy, without any tendency to rickets. In one instance the author prescribed for a lady who was in so miserable a condition when only four months pregnant, that her husband wished him to bring on abortion, as he was certain his wife could not survive to the full time; after taking the chemical food for a month there was so marked an improvement that her friends hardly recognised her, and at the seventh month she stated she had never felt so well before, not knowing what it was to have an ache or a pain. RICHARD NEALE, M.D.

1149. *Eichhorst on Myrtol as a Disinfectant of the Air-passages.*—The problem how to disinfect the air-passages is not yet solved. Skoda's turpentine inhalations are not always tolerated, and require a long use. Masks and similar apparatus (Curschmann and others) are also much objected to by patients. Prof. Eichhorst is of opinion that myrtol will leave all other disinfectants in the background in security and quickness of action. Myrtol is represented by that part of myrtol oil which comes over between 160° and 170°. It is a clear fluid of aromatic and penetrating smell, which can be conveniently administered in gelatine capsules (to be obtained from G. Pohl, Schönbrunn *bei* Danzig). French authors have recommended it in bronchial catarrh, and scattered observations have been made on its disinfecting properties. But a methodical use of this substance has not been made, and it is not mentioned in various recent works on therapeutics. After only one gelatine capsule, the breath smells of myrtol within an hour, and the effect lasts from twenty-four to forty-eight hours; but, in order to subdue putrid processes, two capsules (each containing 0·15 grammes) were usually given every two hours. The appetite improves under its use, and the expectoration and breath lose all offensive odour with remarkable quickness. Four cases are mentioned by Prof. Eichhorst as showing the beneficial action of myrtol in a striking degree, but one of the cases showed that it possesses no specific action against the tubercle-bacillus. The expectoration diminishes under its use; the appetite, as before remarked, improves, and the patients feel better generally. E. J. EDWARDES, M.D.

1150. *Sancerotte on the Use of Digitalis in the Treatment of Pneumonia.*—Digitalis acts, in the first place, on the factor of fever which in pneumonia is often the most prominent symptom. It also circumscribes the area of disease in the lungs, but the main indication for its use is to be found in the general condition of the functions. It is indicated, whatever the extent of the pulmonary lesions, in uncomplicated pneumonia when the pulse-rate exceeds 100. When the temperature is low, on the other hand, neither digitalis nor any other form of active treatment is called for. It should be borne in mind that in fatal cases death supervenes between the eighth and the tenth day, and digitalis attains its maximum effect from the seventh to the tenth day. It is therefore necessary to prescribe the drug not later than the third day.

1151. *Beausse on the Preparations of 'Grey Oil.'*—The first formula contained mercury, 3 parts; lanoline, 3 parts; olive-oil, 4 parts; the mercury being rubbed down with the olive-oil and the olive-oil added. As this preparation, however, easily becomes rancid, vaseline oil was substituted for the olive-oil. The most recent formula, however, is the following: ℞ Ether sulph., 40 grammes; gum benzoin, 20 grammes; after solution and filtration, add liquid vaseline, 15 grammes. Twenty grammes of carefully purified metallic mercury is then put into a ten-ounce bottle with the ethereal solution of benzoin and well shaken, until the mercury is in a condition of very fine division. It is then mixed with 40 grammes of liquid vaseline, or with 20 grammes of the liquid, with an equal quantity of pure ordinary vaseline. The result is a stable and homogeneous preparation, which, however, takes five or six hours to make.

1152. *Formula for Dysmenorrhea.*—℞ Tinct. gelsemii, 2 drachms; aquæ camph., 2 drachms; papine (Battle), 2 drachms. M. Sig. thirty drops every two hours. ALFRED S. GUBB.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1153. Goodell, Dr. Wm. — A Year's Work in Oöphorectomy. (*Obstet. Gaz.*, October 1888.)

1154. Faux, Dr.—On a Case of Fracture of the Pubic Symphysis during Labour. (*Ann. de Gyn.*, October 1888.)

1155. O'Reilly, Dr.—On a Case of Concealed Accidental Utero-Placental Hæmorrhage. (*Progress*, September 1888.)

1156. Bleim, Dr.—On Phimosis in the Female. (*Med. Era*, October 1888.)

1157. Kelsey, Dr. G. E.—On a Case of Pregnancy Complicated by Tubal Gestation. (*Nashville Jour. of Medicine and Surgery*, September 1888.)

1158. McMurtry, Dr. L. S.—On the Treatment of Peritonitis by Abdominal Section. (*Obstet. Gaz.*, October 1888.)

1159. Hulbert, Dr.—On Galvanisation of the Sympathetic for Ovaritis. (*Obstet. Gaz.*, September 1888.)

1160. Auvard, Dr.—On Antipyrin in Obstetrics. (*Bull. Gén. de Thérap.*, Oct. 15, 1888.)

1161. Lepage, Dr. Gabriel.—On Puncture of the Uterus in Hydramnios. (*Annales de Gyn.*, October 1888.)

1162. Séjournet, Dr.—On Compression of the Aorta in Post Partum Hæmorrhage. (*Ann. de Gyn.*, October 1888.)

1163. Coe, H. C., M.D.—The Use of the Curette for the Relief of Hæmorrhage due to Uterine Fibroids. (*New York Med. Record*, Jan. 28, 1888.)

1164. Mackenzie, W. G., F.R.C.S.—Successful Case of Ovariotomy in a Child Eight Years and Six Months of Age. (*Dublin Jour. of Med. Science*, October 1888.)

1165. Jones, Joseph, M.D.—Abstracts of Contributions to Teratology: The Four-legged Child. J. Myrtle Corban. (*Journal of the American Medical Association*, Oct. 20, 1888.)

1166. Döderlein.—Researches Concerning the Presence of Schizomycetes in the Lochia of the Uterus and Vagina of Healthy and Sickly Lying-in Women. (*Archiv für Gynäk.*, vol. xxxi., Part 3.)

1167. Secheyron, Dr.—Distant Results of Complete Vaginal Hysterectomy. (*Archives de Tocologie*, October 1888.)

1168. Weiss.—On Cæsarean Section after Porro on Account of Contraction of the Vagina. (*Archiv für Gynäkologie.*)

1169. Apostoli, G., M.D.—On Electrical Treatment of Uterine Fibroids, with Answers to Objections and Citation of Novelties. (*New York Med. Record*, September 1888.)

1170. Vassalli.—On Extraordinary Fecundity. (*Gazz. Med. Ital. Lombardia*, June 2, 1888.)

Art. 1153. *Goodell on a Year's Work in Oöphorectomy.*—During the year 1887 he had had nineteen cases, with one death; but including the cases he had since had, there was only one fatal result in twenty-nine cases. The cause of death in this fatal case was uræmic coma from suppression of urine. How far the administration of ether was to be blamed for this renal complication he was not prepared to say, but he was inclined to think that chloroform was not so liable to cause congestion of the kidneys. The operation was performed for diseased ovaries and tubes, which were greatly crippling her. The eighteen successful cases were performed for the following reasons and with the following results: Uterine fibroids, cured, five; improved, one; menorrhagia and ovaralgia, cured, two; improved, one; ovaralgia, cured, three; improved, one; epilepsy, improved, one; hystero-neurosis, cured, one; insanity, unimproved, two; pseudo-muscular hypertrophy, unimproved, two. In his experience the removal of the ovaries for uterine fibroids was almost always followed by a cure, that is to say, menstruation ceases, the tumour rapidly lessens in size, and no further inconvenience results from pressure. Of the three cases of menorrhagia associated with ovaralgia, the lack of complete success in one was due to the fact that only one ovary could be removed. The other ovary was so matted in organised exudation as not to be distinguishable. The failure in one of the cases of ovaralgia was due to the persistence of menstruation after a thorough extirpation of both ovaries. This is a very rare result, but it will occasionally happen. Menstruation usually ceases in these cases after the lapse of a few months. In the case in which the ovaries were removed for epilepsy, the result has not thus far been a cure, but the attacks come at longer intervals. In the foregoing nineteen cases the spray was not used, but every other antiseptic detail was carefully carried out. The pedicle was tied with silk; the wound was closed by the same material, and dressed with gauze dipped in a glycerole of carbolic acid. Drainage was employed but once, and that in the fatal case, but this had nothing to do with the issue.

1154. *Faux on a Case of Fracture of the Pubic Symphysis during Labour.*—The patient was a primipara, 25 years of age. There was some narrowing of the outlet, but the exact measurements were not given. Labour had already lasted forty-three hours before Dr. Faux was called in. Two applications of the forceps were made. When the head reached the perineum a cracking noise was heard, and this was repeated as the head was born. The expulsion of the child was the signal for a severe flooding, which was overcome with difficulty. It was only on the morrow that the fracture of the symphysis was made out. No ill effects followed.

1155. *O'Reilly on a Case of Concealed Accidental Utero-Placental Hæmorrhage.*—Mrs. M., 39 years, mother of eight children. At seven and a half months of pregnancy labour-pains commenced on her lifting weight. Uterine contractions were severe and repeated, but there was no bleeding, and the os was undilated at 11 P.M. During the night vomiting and a feeling of weakness set in, and at 6 A.M. the membranes were ruptured. Symptoms were at that time very alarming, extreme pallor, sighs and gasps, thirst, suffocation, syncope, and suspended pulse. Uterine contour smooth and oval. No external bleeding nor fœtal recession. Accidental hæmorrhage was diagnosed, and ergotin, digitalis, and ammonia were administered hypodermically, with warmth to extremities. The os was still undilated, but a slight discharge of blood was noticed. Soon after, she suddenly expired. Cæsarean section was at once performed, and a dead, ex-sanguine fœtus removed. A massive clot half detached the placenta and occupied the right side of the uterus. It was 6 inches wide and 3 inches thick. In Dr. O'Reilly's opinion, in grave concealed accidental hæmorrhage, occurring between the seventh month and full period of pregnancy, where the neck of the womb is thick and the os slightly, if at all, open, dilatation with the water-bag of Barnes is prodigality of moments few and precious. To obtain an empty and contracted womb is certainly the proper indication, but, facing the emergency defined, such tedious methods of attaining it seem more than circuitously slow.

Effectual interference must be prompt and radical. Ergotin, transfusion, and hysterotomy seem rigidly scientific and appropriate. Unstriped muscle is contracted by the first, the second replenishes collapsing vessels, while the third removes the remaining cause of uterine distension. Transfusion has a positive value thoroughly attested.

1156. *Bleim on Phimosis in the Female.*—In a normal clitoris the hood or prepuce is perfectly free from the glans, and can be retracted without difficulty, so as to expose the whole glans and the groove at its base. In many cases (and these are abnormal) it is impossible to do this, because the prepuce is adherent to the surface of the glans. Sometimes only the tip can be exposed, but more often the adhesion exists only over the distal half. It is almost impossible to break up this adhesion without the aid of an anæsthetic, and it is best done as a part of complete orificial work; even cocaine fails often to overcome this sensitiveness sufficiently. On peeling back the prepuce smegma is usually found, confined in the groove, and the affected surfaces highly inflamed and irritable. More rarely than the simple adhesion we find the prepuce tense or shortened laterally, thus binding down or pressing upon the glans. To correct this condition it is necessary to incise the hood up the centre, or to stretch it. If large, it may be advisable to take stitches, and, if too redundant, even to amputate a portion of the prepuce. Bleim claims that the local irritation to which this unrecognised condition gives rise often leads to masturbation and various sexual disorders, and narrates a case in which breaking down the adhesions after slitting up the prepuce effected a permanent cure of the habit.

1157. *Kelsey on a Case of Pregnancy Complicated by Tubal Gestation.*—Mrs. M., aged 32, married fourteen years, and the mother of five children, was first seen on Dec. 20, the last menstrual period having been eight months before. Dr. Kelsey was called to her on Jan. 10, under the impression that labour had begun. The os, however, was firmly closed, and an abdominal examination revealed the presence of two fœtuses, one to the right of the median line high up, and the other in the left iliac region. Only one fœtal heart could be heard. A little morphine quieted the pain, and things remained quiet until Jan. 18, when labour set in with a vertex presentation. Soon after she was delivered of a still-born macerated infant. He removed the placenta without any difficulty, and then introduced the hand into the uterus, but found it empty. The second fœtus could, however, be felt pressing against the left side of the uterus. Hæmorrhage set in, and proved fatal before assistance could be obtained. *Post mortem*, they found a fœtus in the fimbriated extremity of the left Fallopian tube. The placenta was attached to the walls of the tube about midway from womb to fimbriated extremity. The cord was about 8 inches long. The child was perfect, and weighed two pounds. The child in the womb was three pounds heavier than the one in the fimbriated extremity, but not more perfect in development. Decomposition had not commenced in the child in the fimbriated extremity. Dr. Kelsey was of opinion that the child in the womb was dead at his second examination, eight days before birth, and the fœtal heart-beat heard, was from the other. The placenta in the tube was almost as large as the one in the womb. He believed both ovaries were impregnated at the same time, and this was a case of true twins.

1158. *McMurtry on the Treatment of Peritonitis by Abdominal Section.*—The following cases are illustrative of the value of abdominal section in certain forms of peritonitis. Mrs. A., 60, had observed for five months enlargement of the abdomen, uterus retroverted, symptoms pointing to ovarian tumour. After consultation the abdomen was opened, when the case was found to be one of encysted dropsy, the result of tubercular peritonitis. The viscera were all matted together and the peritoneum was thickened, injected, and studded with tubercle. The adhesions were separated, the peritoneum irrigated and cleansed, and the wound closed, with the result that the patient made an uninterrupted recovery, with, so far, no recurrence. In another case, occurring in a woman of 25, an exploratory incision was made and the tubercles removed with great relief to the patient, though some elevation of temperature persists. A third case, that of Mrs. J. B., aged 40, had suffered for years from menorrhagia, dysmenorrhœa, and subacute pelvic inflammation. She was lost sight of for three years, when she again came under observation with the abdomen enlarged and tender, quick pulse and vomiting. Removal of the appendages was decided upon, but on opening the abdomen the pelvic viscera were found to be matted together by old adhesions. A blood-clot was removed from Douglas' pouch, and the peritoneum washed out. She recovered promptly from the operation, but at the end of the second week of convalescence she began to do badly, with tympanites, vomiting, and a quick small pulse at 136. Three weeks after first operation the wound was opened up afresh and a drainage-tube inserted. This time recovery was complete.

1159. *Hulbert on Galvanisation of the Sympathetic for Ovaritis.*—The object of this treatment is less to meet the local indications or the local expressions of the disease, than to affect the patient generally, as well as to remove those particular elements that seem to be perpetuating the local difficulty. The method that Dr. Hulbert adopted is what might be termed sympathetic galvanisation, or galvanisation more especially of the sympathetic; in making the application one electrode is applied upon the spinal column, lumbar or cervical, and the other, the active one, through the vagina to the diseased ovary. Currents ranging from three to fifteen milliampères were about all that the patients could stand with this method. He also resorts to direct galvanisation of the ovary, that being accomplished by placing one electrode in the vagina and the other over the abdomen, bringing the surfaces as nearly together as possible. In some patients it is impossible to use this method; they are unable to stand it. In that class of cases especially, the sympathetic galvanisation is the best means of treatment.

1160. *Auvard on Antipyrin in Obstetrics.*—The conclusions arrived at after using antipyrin in ten consecutive labours are as follows:—1. That in certain impressionable women the administration of antipyrin during labour appeared to give sensible, though slight, relief, due either to the effect of the drug or to the effect on the mind. 2. In most of the cases no effect whatever was produced. 3. That under these circumstances its effect in assuaging the pains of labour must be considered unreliable, and in no sense a substitute for chloral or chloroform.

1161. *Lepage on Puncture of the Uterus in Hydramnios.*—In acute hydramnios, Dr. Lepage recom-

mends puncture of the gravid uterus through the abdominal walls, for the purpose of establishing the diagnosis and relieving the tension. After narrating a case under Dr. Tillaux, in which the operation was performed on a woman, the subject of acute hydramnios, with the result of an abortion at six months, four weeks later, he gives the notes of a case under his own care. The patient, 34 years of age, menstruated for the last time on Jan. 18. At the end of April she noticed that the abdomen suddenly took on a rapid and progressive increase in size, giving rise to extreme pain in the hypochondria. No urinary troubles. Obstinate constipation. The pain and the interference with respiration decided the patient to enter the maternity department at the Lariboisière Hospital under Dr. Pinard. On admission no symptoms of albuminuria were present, but the abdomen was larger than at full time. From June 21 to 24 the increase of size was well marked. She was given iodide of potassium, but without any relief, and the pain had to be assuaged by hypodermic injections of morphine. By July 1 her condition had become insupportable, the abdomen measuring 109 centimètres (42 inches), on a level with the umbilicus. Dr. Pinard, finding that the membranes accessible to the finger *per vaginam* were not tense, and hesitating between a diagnosis of twin pregnancy with dropsy of the amnion, and a simple pregnancy associated with a tumour, plunged a trocar (No. 2) 8 centimètres to the left and above the umbilicus. Five litres of a yellow liquid came away, and the uterus began to contract firmly. As the evacuation of the fluid proceeded, it became possible to practise abdominal palpation, and two heads were discovered inside the uterus. In the course of an hour 21 litres of fluid were drawn off, and the aperture painted with collodion. The patient was immensely relieved, and left the hospital at her request on July 13. On the 20th, at 3 P.M., while out for a walk, she was seized with labour-pains, and was delivered at 4.30 P.M. of an ascitic and œdematous fœtus, presenting by the breech, and weighing 1,450 grammes. The second fœtus was born at six o'clock, and was macerated, weighing only 1,000 grammes. There was no trouble with the after-birth, which was single. The two cavities were separated by a partition of four membranes. The patient left quite well on July 31. The puncture of the uterus under these circumstances is devoid of danger for the mother, provided it be done antiseptically. This fact is proved by the numerous instances of puncture of the gravid uterus in the course of other operations, or as the result of mistaken diagnosis. It not only clears up the diagnosis which is otherwise quite impossible, but it obviates the risk which the condition imposes on the mother. It may bring about abortion or premature delivery, but this hardly constitutes an objection, seeing that, in hydramnios of any degree of severity, it is extremely rare that pregnancy goes on to term, and that the fœtus does not present some abnormality incompatible with life, even admitting that life is not already extinct.

1162. *Séjournet on Compression of the Aorta in Post Partum Hæmorrhage.*—Compression of the aorta, as a means of controlling post partum hæmorrhage, has the advantage of being always and promptly available, at a moment when minutes are centuries, and when the delay in procuring water at a proper temperature may prove fatal to the patient. When face to face with a sudden and violent outburst of hæmorrhage, Dr. Séjournet, having given some freshly powdered ergot, disinfects his hand and introduces it into the uterine cavity, compressing the aorta against the vertebral column. The bleeding ceases immediately. The pressure is maintained for from ten to twenty minutes, until fatigue compels the operator to call the nurse to his assistance, who compresses the aorta through the abdominal walls. Five cases are recorded in which success attended this treatment, the pressure being kept up in some cases as long as an hour. The method is quite devoid of risks, *per se*, and, as the observations prove, reliable and prompt in its effects.

Alfred S. Gubb.

1163. *Coe on the Use of the Curette in Cases of Bleeding Fibroids.*—Dr. Coe advocates the use of the curette for the relief of bleeding fibro-myomatous tumours of the uterus. He sums up, in the following manner, the principles of this method of treatment. 1. The hæmorrhage in cases of fibroid tumour of the uterus has its source, not in the tumour itself, but in the hypertrophied endometrium. 2. The hæmorrhage is not directly proportionate to the size of the tumour, but to the extent of the mucous surface. Venous obstruction and the menstrual congestion in the mucosa are the chief active causes. 3. In certain cases the hæmorrhage can be diminished for a considerable period by thoroughly scraping away the hypertrophied endometrium and repeating the operation as often as may be necessary to keep the menorrhagia under control. 4. Curetting is merely a palliative measure, but it may enable the patient to survive until she is relieved at the menopause, whereas radical operations too often result fatally. 5. Curetting in these cases should be regarded as an experiment, which, however, is so harmless and so frequently successful, that we are justified in giving it a fair trial before advising oöphorectomy, myomotomy, or supravaginal amputation. 6. The use of the curette requires no special skill. It is an operation for the general practitioner, preferable to the practice of allowing the patient to become exhausted by repeated hæmorrhages which medication and other palliative measures are powerless to control. [It is to be regretted that Dr. Coe speaks of curetting as 'so harmless,' as requiring 'no special skill,' and as 'an operation for the general practitioner.' Like many similar procedures it is simple, at least relatively simple, to experienced gynæcologists. Inexperienced interference with fibroid tumours, and neglect of vaginal injections before or after the use of the curette, may cause disastrous consequences. In the hands of Dr. Coe or of any experienced person, with well-trained nurses who understand how to keep the patient clean, the curette may no doubt be used with benefit in cases of bleeding fibroids.—*Rep.*]

1164. *Mackenzie on Ovariotomy in a Child aged Eight: Recovery.*—The patient was a delicate child of slender build and fair complexion. Her head was large, with prominent frontal eminences. Six months before the patient's admission into the Belfast Hospital for Sick Children she was laid up with a severe cold, and her mother then noticed, for the first time, that her abdomen was swelling. The distension increased rapidly. About the middle of September the girth of the abdomen midway between the ensiform cartilage and umbilicus was 24½ inches; at the umbilicus the circumference was just 1 inch less. These measurements increased more than 1 inch

within a month after admission. On October 13, 1887, ovariotomy was performed at noon. A dose of castor-oil had been given on the previous evening, an enema of hot water early in the morning, and a cup of beef-tea at eight o'clock. The abdomen was opened by an incision in the median line, 2½ inches long, midway between the umbilicus and pubes. Two-and-a-half quarts of fluid were removed, and some slight parietal adhesions broken down. The pedicle, 2 inches long, was tied by the Staffordshire knot. The abdominal wound was closed by three deep silver-wire sutures, and three superficial silk sutures, and dressed with powdered iodoform, iodoform gauze, and absorbent cotton. The patient was unmanageable on the day after the operation, but was pacified by removal to the medical ward, where she had been before operation. Recovery was perfect. The tumour was a dermoid cyst of the left ovary. [The frequency of dermoid tumours in children is well known. For references to the literature of ovariotomy in infancy and childhood *see* LONDON MEDICAL RECORD, 1884, article 2,684. The youngest patient was Küster's, reported by Roemer ; she was 1 year and 8 months old, and recovered. Since the above-quoted article was written, Dr. Hooks, of Texas, operated on a child 30 months old. The tumour had been tapped, and there were numerous parietal and omental adhesions. The patient died in twenty-four hours (*Amer. Jour. Obstet.*, vol. xix., p. 1,022). See also Dr. Idelson's notes to Polotebnoff's case of ovariotomy in a girl aged 9 (LONDON MEDICAL RECORDER, March 1888, p. 117, Art. 244). The reporter has recently described a case where a 7-months' child was born with both ovaries converted into large cystic tumours of peculiar structure. (*Brit. Med. Jour.*, Oct. 20, 1888, p. 878). Papillomatous or hilum-cysts have been found in the fœtus by the reporter (*Trans. Path. Soc.*, 1881) and by Mr. Bland Sutton (*An Introduction to Pathology*, 1886, p. 205). Thin-walled cysts in fœtal ovaries are frequent. Winckel believes that cases of the common multilocular glandular cysts have occurred in fœtal life and childhood.—*Rep.*]

1165. *The Case of Pregnancy in a Double Monster.*—In the LONDON MEDICAL RECORDER of October 1888, p. 450, a note will be found of a remarkable case where a young married woman, possessing four lower extremities and two complete sets of genital organs, bore a child in her right uterus. Dr. Jones, of Louisiana, has traced the case to the birth of the mother. She was born in Tennessee on May 12, 1868. Her parents were healthy, the mother nine years older than the father, who was 25 years of age. The infant, Josephine Myrtle Corban, was well-nourished and vigorous. The lower part of the spine seemed to be cleft, the pelves quite distinct. The umbilici were not equally well developed, and not on the same level. Micturition from both urethræ was observed. The right outer leg was club-footed. The two inner legs (the left of the right pelvis, and the right leg of the left pelvis) were less developed than the outer, except at their junction with the body. [From the woodcut appended to Dr. Jones's article, representing a photograph taken on June 16, 1868, the inner legs appear larger in proportion to the outer than they do in the sketch which accompanies Dr. Whaley's paper, and was taken this year.—*Rep.*] One toe was bifid on the left extra inward extremity. Dr. Jones's attention was turned to the above case, which he had reported in conjunction with the late Professor Paul Eve, in 1868, by a perusal of Dr. Whaley's case of pregnancy in a double monster. After careful inquiry it was proved that Dr. Whaley's patient was Myrtle Corban grown up. She was 'attractive in face, physically well, and able to attend to all her household duties.'

1166. *Secheyron on the Distant Results of Total Extirpation of the Uterus through the Vagina.*—Dr. Secheyron favours this operation, finding that statistics prove a steady diminution in mortality every year. Available statistics lumped together show a mortality of about 24 per cent. Brennecke, Klotz, Léopold, and Heilbrunn have had unusual success. Between January and September 1881 Péan has performed sixteen operations of this kind without a death. The task of ascertaining distant results is particularly difficult. Many cases never returned to hospital after recovery from the operation, others were examined too shortly after convalescence for satisfactory prognosis. The following tables were drawn up, showing the mortality in France and abroad—that is, in the experience of Russian, German, British, or American operators :—

Vaginal Extirpation of the Uterus for Cancer.

	French (105 cases). Per cent.	Foreign (394 cases). Per cent.
Operation mortality	23·8	15·47
Death from recurrence	18·8	—
Recurrence ascertained	23·75	1·8
No recurrence within 6 months...	8·75	2·4
,, after 6 ,, ...	8·75	66·43
,, ,, 12 ,, ...	15	33·91
,, ,, 18 ,, ...	7·5	20·97
,, ,, 24 ,, ...	5	18·18
,, later than 24 ,, ...	3·75	10·48

Dr. Secheyron admits that these statistics are open to much criticism, for it is clear that the 'no recurrence' figures depend on very varied conditions. He believes that the French returns are the most trustworthy, without giving any reasons for his opinion. We may rightly conjecture, however, that he has been better able to communicate with his countrymen, whose operations he has seen announced, than with foreigners, whose addresses are often difficult to procure. Dr. Secheyron then turns to the question of justifiability of the operation in relation to the percentage of recurrences, for he does not question the right of operating in respect to the now low mortality immediately after the operation. He dwells on the fact that although the recurrence of cancer after amputation of the breast before glandular infection is very high (26 per cent., Cazin), yet surgeons do not hesitate to amputate cancerous breasts. Dr. Secheyron objects to partial hysterectomy, which, in his opinion, exposes the patient to all the dangers of pregnancy, and the strong possibility that islets of epithelioma may be left behind. The mortality is also high, and recurrence very frequent. Vaginal hysterectomy should be total, and limited to well-circumscribed cancers of the body or cervix. The after-history should be carefully followed up and noted. [Many British authorities are not of the same opinion as Dr. Secheyron, and prefer supravaginal amputation of the cervix, when that part of the uterus is cancerous, to total extirpation of the uterus through the vagina. The scientific reasons for their preference are explained in a review of Dr. John Williams's *Cancer of the Uterus*, LONDON MEDICAL RECORDER, June 1888, p. 266.—*Rep.*]

1167. *Döderlein on Schizomycetes in the Genital Tract of Lying-in Women.*—Döderlein found that the lochia from the uterus were normally free from schizomycetes, whilst the lochia from the vagina naturally contained numerous germs of different species. The uterine discharges did not produce any effects on animals, the vaginal lochia set up the symptoms of infection. The presence of germs of any kind in the puerperal uterus usually caused a rise of temperature; when the temperature fell, the lochia were found to be once more free from the germs. These germs are naturally removed by a free puriform secretion. Germs may be detected in the uterus even before the rise of temperature. Hence there must be a period of incubation, and a concurrence of circumstances favouring perfect incubation. The uterine lochia containing germs, in cases of fever, produce in animals phenomena of infection. These phenomena are not produced when there are very few germs in the lochia; in these cases the clinical symptoms were little marked in the original patients whence the lochia were procured. The vagina might contain germs in cases where there has been no previous examination (true 'Selbstinfektion'). The lochia of sickly lying-in women always contain germs, the streptococcus pyogenes being constant. As in the case of the vagina, the uterus may contain germs even when that organ has not previously been examined or subjected to any kind of operation.

Alban Doran.

1168. *Weiss on Cæsarean Section after Porro on Account of Contraction of the Vagina.*—Dr. Weiss, of Schwerin, reports in the *Archiv für Gynäkologie* the case of a woman with a shallow pelvis, whose conjugata diagonalis measured about 11 centimètres. Her first delivery was spontaneous; but three years after the second fœtus had to be extracted with perforation, the perinæum and vagina being badly torn. A year later she was delivered again, with the aid of the forceps. At this time Weiss saw her, and found that the vagina had been changed into a cicatricial tube (Narbenschlauch), which terminated upwards in a small unyielding opening. Only a small portion of the perinæum remained. Fourteen months later the woman had her fourth labour. The vagina was by this time still more altered by cicatrisation, so that no opening upwards could be found. After three days' labour violent shivering set in, and the uterus began to relax. Weiss did the Cæsarean section after Porro while the fœtus was still alive. The opening of the uterus was done *in situ*; then the uterus was lifted out, ligated, and excised. The mother recovered, and the child, though in a state of asphyxia when extracted, was saved. This case is interesting, because cicatrised contractions of the vagina are seldom so considerable as to resist the forces of nature.

John Elliott.

1169. *Apostoli on the Electrical Treatment of Uterine Fibroids.*—This article contains a *résumé* of the objections raised by different opponents to electrical treatment, and with appropriate answers to each. Many points must be still left in the dark until scientific research places them on a proper foundation. We notice that Dr. Apostoli has profited by the criticisms of the profession, and adopted some of the new suggestions made. He has also improved his method of application. In order to reach the entire mucous membrane the uterine cavity is packed with gelosine (a mucilaginous principle obtained from seaweed); a metallic sound insulated up to the point is then passed into this mass, and the current diffuses all over it. A description is given of a new intra-uterine electrode, with the exposed portion made of gas carbon. There are seven different sizes, each 2½ centimètres long, and made to screw on to the end of the sound.

J. Inglis Parsons, M.D.

1170. *Vassalli on a Case of Extraordinary Fecundity.*—Dr. Francesco Vassalli reports (*Gazz. Med. Ital. Lombardia*, June 2, 1888) a case of extraordinary fecundity occurring at Luzano, where a woman, aged 36, was delivered of six fœtuses at the end of the fourth month of pregnancy. For the previous month she had suffered greatly from the abdominal distension, which was as great as that of a woman at full term. The first fœtus was aborted naturally and without bad symptoms, twenty-four hours before the occurrence of bleeding and other unfavourable signs called for the induction of premature labour. There was extremely severe flooding, but the patient made a good recovery. The fœtuses were alive when born, and were well developed. This case appears to be unique in the annals of obstetrics.

Walter Pye.

DERMATOLOGY.

RECENT PAPERS.

1171. Buzzi.—On Hyperidrosis in Fat Persons. (*Vierteljf. für Derm. und Syph.*, 1888, Heft 3.)

1172. Galtung.—On Scarlatina and Varicella. (*Ibid.*)

1173. Boeck.—On the Treatment of Eczema. (*Ibid.*)

1174. Ducrey.—On the Alleged Contagiousness of Psoriasis. (*Ibid.*)

1175. Raymond.—On Urticaria. (*Ibid.*)

1176. Neisser.—On Epithelioma (sive Molluscum) Contagiosum. (*Ibid.*)

1177. Weyl and Guttmann.—On Anthrarobin. (*Ibid.*)

1178. Contento.—On Malignant Pustules. (*Ibid.*)

1179. Demme.—On Erythema and Multiple Gangrene of the Skin. (*Ibid.*)

1180. Spaeth.—On a New Method of Treating Indolent Ulcers. (*Ibid.*)

1181. Pellizzari.—Researches on Trichophyton Tonsurans. (*Ibid.*)

1182. Hahn.—On the Transplantation of Carcinomatous Skin. (*Ibid.*, Heft 5.)

1183. Friedlaender.—On a Case of Cured Sklerodema. (*Ibid.*)

1184. Arnozan.—On a Case of Xeroderma Pigmentosum. (*Annales de Derm. et de Syph.*, vol. ix., No. 6.)

1185. Zuriaga.—On Leprosy in Parcent. (*Ibid.*)

1186. Jacquet.—On the Production of the Wheal of Urticaria. (*Ibid.*, No. 8.)

1187. Unna.—On the Treatment of Sweating Feet and Hands. (*Monatsh. für prakt. Derm.*, vol. vi., No. 15.)

1188. Eichhoff.—On the Contagiousness of Alopecia Areata. (*Ibid.*, No. 20.)

1189. Herx-Heimer.—On the Treatment of Lichen Ruber Planus. (*Ibid.*)

1190. Leontowitsch.—On an Eruption from the Internal Use of Arsenic. (*American Jour. of Med. Sciences*; *Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vi., 1888.)

1191. Blanc.—On the Mycosis Fungoïde of Alibert. (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vi., 1888.)

1192. The New York Dermatological Society.—Lichen Planus and Lichen Ruber. (*Ibid.*)

1193. Bidenkap.—On the Treatment of Lepra. (*Ibid.*)
1194. Roesen.—On the Treatment of Abnormal Developments of Epidermis; Callosities, Corns, and Warts. (*Ibid.*)

Art. 1171. *Buzzi on Hyperidrosis in Fat Persons.*—The author (*Viertelj. für Derm. und Syph.*, 1888, Heft 3, p. 418) is opposed to the idea of Kisch that the cause of hyperidrosis in stout persons is due to the increased exertion attending the increased weight of the body, and believes that the cause is to be found in the obstruction to the venous blood, caused by the pressure of the subcutaneous fat. A condition of passive hyperæmia is so produced which leads to hyperidrosis and seborrhœa.

1172. *Galtung on Scarlatina and Varicella.*—The author (*Viertelj. für Derm. und Syph.*, 1888, Heft 3, p. 419) reports on eight cases in which scarlatina and varicella ran their course together in the same patient. In most of the cases scarlatina appeared first and was followed within from two to six days by varicella.

1173. *Boeck on the Treatment of Eczema.*—Boeck (*Viertelj. für Derm. und Syph.*, 1888, Heft 3, p. 425) recommends in the obstinate forms of eczema which are so frequent in the second half of the first years of life in children, especially on the face and the extensor surfaces of the extremities, when simple remedies have failed, the application of weak solutions of nitrate of silver (1 in 500), alternating with applications of ointment. The solution of the nitrate is usually applied in the morning for two to three hours, and again from two to three hours in the evening, the linen in which it has been soaked being covered by gutta-percha paper. During the other periods of the day and night a soothing ointment such as ungt. vaselin. plumbic. is applied. The same treatment can be advantageously used in the weeping eczema of adults.

1174. *Ducrey on the Alleged Contagiousness of Psoriasis.*—Ducrey (*Viertelj. für Derm. und Syph.*, 1888, Heft 3, p. 425) made numerous experiments on human beings and animals (rabbits, guinea-pigs, and dogs), to test whether the disease could be communicated. His experiments consisted first in firm rubbing of a mixture of psoriatic scales with lymph and blood on the unbroken skin, and also on skin which had been abraded, and in which shallow incisions had been made. Secondly, the same mixture was applied to blistered surfaces. Thirdly, injections of the products of psoriasis into the skin, rectum, peritoneum, and trachea. All these experiments resulted negatively whence Ducrey has drawn the conclusion first, that psoriasis is not communicable either to man or animals; secondly, that various forms of parasites which have been found by authors in the eruption of psoriasis, and which are usually found in other affections, cannot be looked upon as the real cause of the disease.

1175. *Raymond on Urticaria.*—Dr. Paul Raymond (Paris, 1888, O. Doyen, noticed by Dr. R. W. Randnitz in *Viertelj. für Derm. und Syph.*, 1888, Heft 3, p. 490), has brought together the twenty-six published cases of urticaria pigmentosa, to which are added two cases of Behrend's which are not yet described, and three of his own. In one of his cases he excised two portions of skin, one when the eruption was developing, and the other when it was healing. In the first he found in the skin large granular cells in rows; immediately under the deepest layer of the epidermis there was normal connective tissue. There were a few hæmatin crystals in the papillæ. In the second piece the previously described cells were breaking down, and there were more numerous hæmatin crystals. The granular cells he associates with the connective tissue, and considers that the colour of the wheal is due to these cells.

1176. *Neisser on Epithelioma (sive Molluscum) Contagiosum.*—Professor Neisser (*Viertelj. für Derm. und Syph.*, 1888, Heft 4, p. 555) has satisfied himself that the new growth in molluscum contagiosum is a pure epithelioma which springs direct from the rete mucosum. He has further satisfied himself that the disease is parasitic and contagious. The parasite belongs, he believes, to the class of sporozoa, and more particularly to the coccidia. He has only succeeded in showing this by microscopic examination, cultivation and inoculation experiments having given him negative results. Careful investigation of sections has, however, left him in no doubt that the view indicated by Klebs and more definitely by Virchow, and explicitly stated by Bollinger and the author in 1882—namely, that gregarinæ are essentially the cause of this form of epithelioma, is right. He first satisfied himself as to this point on fresh unstained preparations after he had examined hardened and coloured sections without result. The appearances described by authors as vacuoles can, he states, on examination when fresh, or after hardening in perchloride of mercury, or osmic acid, be recognised as isolated corpuscles. By the latter methods they can be recognised as small oval bodies, pointed at the extremities, with defined limits, and having a small round nucleus. All the epithelial cells had not fallen victims to this growth. An affected epithelial cell becomes larger, loses its prickles, and the nucleus, whilst retaining its size, shows often three to five rounded, sometimes also elongated, nuclei. Gradually, however, the nucleus becomes smaller and alters its position in the cell, and is pressed by the growing parasite out of its central position, becomes compressed, and eventually resembles a small half-moon-shaped disk. The remains of the nucleus, however, are always to be found. For Neisser the molluscum corpuscle is an epithelial cell which has undergone a process of cornification, and is filled with parasites, and the remains of the nucleus.

1177. *Weyl and Guttmann on Anthrarobin.*—Weyl (*Viertelj. für Derm. und Syph.*, 1888, Heft 4, p. 615) states that he fed rabbits with large doses of anthrarobin without any striking effects being produced. Anthrarobin was detected in the urine. Guttmann (*ibid.*) had treated six cases of psoriasis with the remedy on one side of the body, treating the other side with chrysarobin. All the patches treated with anthrarobin got well, but slower than under chrysarobin. No dermatitis or conjunctivitis was observed. Rosenthal (*ibid.*), however, states that in one case in which he employed anthrarobin on the scalp a deep red colour of the hair was the result.

1178. *Contento on Malignant Pustule.*—Contento (*Viertelj. für Derm. und Syph.*, 1888, Heft 4, p. 617) treated successfully six severe cases of malignant pustule by hypodermic injections of three per cent. solutions of carbolic acid. The injections were made round the central point, at a distance of about a centimètre from the line of demarcation, there being one and a half centimètres between the points of injection. In addition, two injections

were made in the centre. The number of injections made at one sitting varied according to the size of the pustule; from six to twenty-five as a rule. Striking improvement was observed within twenty-four hours.

1179. *Demme on Erythema and Multiple Gangrene of the Skin.*—Demme (*Viertelj. für Derm. und Syph.*, 1888, Heft 4, p. 619) relates five cases of erythema nodosum complicated with purpura, in two of which multiple gangrene occurred on the affected places. The severe local and general symptoms in these two cases, as well as the circumstance that amongst the reported cases three sisters were found, suggests, the author believes, the contagiousness as well as the infectious nature of the disease.

1180. *Spaeth on a New Method of Treating Indolent Ulcers.*—Spaeth (*Viertelj. für Derm. und Syph.*, 1888, Heft 4, p. 620) remarks that the chief cause of the defective healing process in indolent ulcers lies in the insufficiency of the blood supply in their borders, which are usually composed of thick, callous, connective tissue. The same conditions rule when the basis of the ulcer is a fascia. In such cases paring the edge of the ulcer as well as transplantation is useless. The method he proposes consists in incising the basis of the ulcer to reach the sound tissue, so that the incised wounds are widely opened. An abundant granulation tissue forms, which rapidly leads to healing.

1181. *Pellizzari's Researches on Trichophyton Tonsurans.*—The author (*Viertelj. für Derm. und Syph.*, 1888, Heft 4, p. 622) states that there is a form of tinea circinata on the palms which, beginning like an eczema sudamen or a herpetic eruption, may remain for years and simulate a chronic eczema or a hyperkeratosis palmaris. He also states that there is a form of tinea tonsurans in which there is a complete absence of appearance of irritation, and in which the hair becomes thin after the formation of the defined patches of ordinary ringworm, and that cases of this kind, having no tendency to spontaneous cure, may last a very long time.

1182. *Hahn on the Transplantation of Carcinomatous Skin.*—Hahn (*Viertelj. für Derm. und Syph.*, 1888, Heft 5, p. 825), in the case of a woman, who was the victim of a return of carcinoma of the mammæ, in which an operation was no longer admissible, excised three pieces of skin from a part which was the seat of the carcinomatous infiltration, and transplanted them to incisions made on the other and left side. On all the transplanted points healing took place rapidly. Four weeks afterwards, in the infiltrated parts of the left side, small vascular nodules formed, and, when the patient died, ten weeks later, examination proved that in the neighbourhood of the transplantation territories a typical carcinoma had developed. Hahn, therefore, utters a warning regarding the imprudent use of instruments in operations on patients suffering from carcinoma.

1183. *Friedlaender on a Case of Cured Sklerodermа.*—Friedlaender (*Viertelj. für Derm. und Syph.*, 1888, Heft 5, p. 829) observed in a girl 8 years old a case of universal skleroderma, stated to have been produced by fright. Through a prolonged course of baths, each bath lasting three hours, and *massage*, the patient recovered within four months.

1184. *Arnozan on a Case of Xeroderma Pigmentosum.*—The author (*Annales de Derm. et de Syph.*, vol. ix., No. 6) describes a case of this disease in a boy aged 11, in which the localisation of the lesion is worthy of notice, the spots being confined to the face, neck, and backs of the hands. On the neck they were limited exactly by the line of the hair, which grew from the perfectly normal skin.

1185. *Zuriaga on Leprosy in Parcent.*—Dr. Zuriaga (*Annales de Derm. et de Syph.*, vol. ix., No. 6) has received documentary information from the Mayor of Parcent in the province of Alicant, from which it appears that before 1850 there were no lepers in Parcent. A leper came to live in this village in 1850, and since that year there have been about sixty cases of which forty-five have died, there being yet fifteen remaining.

1186. *Jacquet on the Production of the Wheal of Urticaria.*—Jacquet (*Annales de Derm. et de Syph.*, vol. ix., No. 8) states that if one part of the body, for example, the leg of a person the subject of a generalised urticaria, is hermetically protected, the pruritus and wheals are suddenly and absolutely arrested on that part, the rest of the body being unaffected. This result was found in four patients, and in two of them repeated on several occasions. The limbs were bandaged with cotton wadding. The author infers from this fact that urticaria is produced by local stimulation combined with a peculiar condition of the vaso-motor nerves of the skin.

1187. *Unna on the Treatment of Sweating Feet and Hands.*—Dr. Unna (*Monatsh. für prakt. Derm.*, vol. vi., No. 15) recommends the treatment of cold sweating feet with hot foot baths, which should be taken at night with some stimulating substance such as spirit of camphor, mustard, or vinegar, thereupon drying the hands and feet and rubbing with a stimulating ointment, for example, ichthyol and turpentine, of each five parts; zinc ointment, ten parts. In the morning, after washing, they should be rubbed with cold water and exercise taken, the cold rubbing being continued until a condition of hyperæmia and warmth is produced. The stockings are to be powdered with starch powder, mixed with a little mustard. In the treatment of warm sweating hands and feet he recommends ichthyol, but without the warm water at night and the cold water in the morning. In the evening he recommends lukewarm water and rubbing with a simple ichthyol ointment (ichthyol, aqua āā, 5·0; lanolin, 20·0). In the morning washing with lukewarm water and ichthyol soap, rubbing off the lather with a dry towel so that some remains on the hands and feet.

1188. *Eichhoff on the Contagiousness of Alopecia Areata.*—Eichhoff (*Monatsh. für prakt. Derm.*, vol. vi., No. 20) remarks that from 1876 to 1884 he saw from four to six cases of alopecia areata in a year, whilst amongst the same total number of patients from April 1884 to March 1886 the number of cases suddenly increased to thirty-six. Out of these thirty-six patients ten had been under the hands of the same barber, and in all of these ten the disease was observed shortly after the hair had been cut and brushed. Of the other patients, seven dwelt in one locality outside the city and four in another, whence he presumes there was a common cause for the seven and four respectively. In three cases the disease had been preceded by emotional disturbance; in twelve he could find no apparent cause. After the barber had been warned, and had disinfected his tools, no more cases came from his neighbourhood; and since 1887 the number of cases of alopecia areata have again decreased to

five or six in a year. He treated his cases with parasiticides with success.

1189. *Herx-Heimer on the Treatment of Lichen Ruber Planus.*—Dr. Herx-Heimer (*Monatsh. für prakt. Derm.*, vol. vi., No. 20) has confirmed Bronson and Boeck in regard to the successful treatment of lichen ruber planus by chrysarobin. A woman, 25 years of age, was treated by an application to the skin twice a week of 10 per cent. chrysarobin traumatica, whilst an affection of the mucous membrane was touched with a 10-per-cent. solution of perchloride of mercury in alcohol. Within four months a cure had taken place, and within seven months there had been no relapse. Three other cases are related in which the same treatment was successful.

1190. *Leontowitsch on an Eruption from the Internal Use of Arsenic.*—Dr. Leontowitsch (*American Jour. of the Med. Sciences; Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vi., 1888) reports a case of eruption from internal use of Fowler's solution occurring in an old lady, the dose being a small one, administered twice daily for the relief of obstinate chills and fever. On the second day severe itching manifested itself on the neck and chest; on the third day a small macular red exanthem appeared upon the above-mentioned regions, the skin being slightly swollen and the seat of intolerable itching. By the fifth day it had spread over the abdomen. Upon discontinuing the remedy the cutaneous symptoms disappeared in three or four days, but were reproduced as before on taking the arsenic a second time. It was subsequently shown that while the patient could not tolerate either arsenite of potassium or arsenious acid with bromide of potassium, arsenite of quinine caused no unpleasant symptoms.

1191. *Blanc on the Mycosis Fungoïde of Alibert*—Dr. Blanc (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vi., 1888), in reviewing a remarkable case of this disease, states that, without apparent cause, the disease began as an eruption similar to, if not identical with, eczema, accompanied by an intense pruritus which has continued to this day (May 12, 1888). The tumours, which later on formed a conspicuous feature of the disease, did not appear until after frostbite in January 1887, or three-and-a-half years after the beginning of cutaneous inflammation. The tumours have spared no portion of the body except the face and scalp, and occur on the thinnest as well as the thickest surfaces. Though tender to the touch, they are not painful, and, though congested, they have never bled from ulceration. Their occurrence on the hard palate goes to show that the mucous membranes are by no means exempt from the disease. The spontaneous appearance and disappearance of the tumours is an interesting feature, for several that grew to the size of a pecan-nut were observed to pass through their stage of growth and resolution within six weeks, while certain others, half the size, would remain three times as long. In a general way it may be stated that the soft, discharging tumours grew largest and disappeared soonest.

1192. *The New York Dermatological Society on Lichen Planus and Lichen Ruber.*—Dr. Piffard (*Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vi, 1888) moved that a vote of the society be taken as to whether lichen planus and lichen ruber were distinct forms of disease or only varieties of the same disease. The motion having been put to the society by the president, the vote resulted as follows:—Drs. Bronson, Bulkley, Campbell, Cutler, Fox, Jackson, Keyes, Morrow, Piffard, Sherrell, Taylor, Weisse, Fuller, and Allen held that they were two distinct and separate diseases. Drs. Elliot and Klotz were of the opinion that lichen planus and lichen acuminatus were varieties of one disease, lichen ruber.

1193. *Bidenkap on the Treatment of Lepra.*—Bidenkap (*Deutsche med. Zeit.*, No. 100, 1887; *Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vi., 1888) has only seen one case of leprosy benefited by Unna's ammonium sulpho-ichthyolicum out of many on which it has been tried, and, according to his observation, the following is the best formula for local treatment. It is spread thickly, and applied for 36 to 48 hours, every eight to 14 days. ℞ Olei olivarum, 20 pts.; resinæ Colophonii, 20 pts.; ceræ flavæ, 40 pts. Melt over a water bath for half an hour, with constant stirring. Cool and add the following mixture: ℞ Gummi resinæ ammoniaci, 2 pts.; balsami terebinth. venetæ, 2 pts.; chrysarobini, 12 pts.

1194. *Roesen on the Treatment of Abnormal Developments of Epidermis, Callosities, Corns, and Warts.*—Roesen (*Munschen med. Wochensch.*, No. 28, 1888; *Jour. of Cutaneous and Genito-Urinary Diseases*, vol. vi., 1888), following Nussbaum's suggestion, has employed salicylic acid in substance instead of dissolved in collodion, applying it as a powder upon the lesions in question, and covering with moistened bandages. The results have been very good. The method consists of the following procedure. The lesion to be treated is first made moist with an aseptic solution, and then covered with quite a thick layer of salicylic acid. Over this is placed some of the finest borated lint, in four thicknesses, and the whole is bound down with a piece of gutta-percha. This dressing is to remain in ordinary cases for five days without being disturbed. After the dressing is removed, the pathological process is found easily and painlessly cured, and without any bleeding. In more obstinate and harder lesions the dressing must remain on for ten days, or after five days be renewed.

G. Thin, M.D.

PHYSIOLOGY.

RECENT PAPERS.

1195. Pisemsky, Dr. Konstantin D.—A Contribution to the Study of Morbid Changes caused by Antipyretics (Antipyrin, Thallin, Antifebrin). (*St. Petersburg Inaugural Dissertation*, 1887, p. 48, with 15 figs.)

1196. Zantchevsky, Dr. Vasily M.—A Contribution to the Study of Morbid Changes in Poisoning by Cocaine. (*St. Petersburg Inaugural Dissertation*, 1888, p. 39.)

1197. Tomasini.—Action of Urea on Ciliary Movements. (*La Medecina Contemporanea*, March 1888.)

1198. Errico.—On Oscillations of the Body during Walking. (*Revista Clinica et Terapeutica*, March 1888.)

1199. Dastre and Loye.—On Transfusion (*Le Lavage du Sang*). (*Arch. de Phys. Norm. et Path.*, 1888, No. 6, p. 93.)

1200. Dastre, A., and Pampoukis, S.—On the Effect of Balancing on Respiration, &c. (*Influence du balancement sur les mouvements de la respiration et sur la position des viscères*). (*Arch. de Phys. Norm. et Path.*, 1888, No. 7, p. 277.)

1201. SMITH, PRIESTLEY.—On the Escape of Fluid from the Aqueous and Vitreous Chambers under Different Pressures. (*Ophthalmic Review*, July 1888.)

1202. MOSSO, PROFESSOR A.—On the Use of Methyl-green in the Examination of Cells (*Anwendung des Methyl-grün zur Erkennung der chemischen Reaction und des Todes des Zellen*). (Virchow's *Archiv*, Band cxiii., Heft 3, p. 397.)

1203. GAUCHER, COMBEMALE, AND MARESTANG, DRS.—On the Physiological Action of Edwigia Balsamifera. (*Bull. Méd.*, Sept. 30, 1888.)

1204. BREMOND, FILS, M.—On the Eutrophic Action of Turpentine. (*Revue Gén. de Thérap.*, July 5, 1888.)

1205. RIETSCH, M.—On Experimental Tetanus. (*Bull. Méd.*, Aug. 15, 1888.)

1206. SCHREIBER, PROFESSOR J.—The Spontaneous Secretions of the Fasting Stomach. (*Archiv für Exper. Pathol. und Pharmacol.*, Band xxiv., Heft 6.)

1207. ROSSI AND AGOSTINI.—On the Action of Bromide of Potassium on the Nervous Centres. (*Lo Sperimentale*, July 1888.)

1208. TANSINI.—The Effect of opening Visceral Cavities on the Action of the Heart. (*Gazz. Med. Italiana*, Aug. 18, 1888.)

ART. 1195. *Pisemsky on Morbid Changes caused by Antipyrin, Thallin, and Antifebrin.*—Dr. Konstantin D. Pisemsky, of St. Petersburg, has (*St. Petersburg Inaugural Dissertation*, 1887, p. 48) carried out in Professor N. P. Ivanovsky's laboratory three series of experiments on healthy adult rabbits and dogs, in order to study morbid changes arising in the animal system under the influence of large doses of the said three drugs so extensively used in daily practice all over the world. The outcome of Dr. Pisemsky's researches, presenting a considerable practical interest, may be summarised as follows:—I. *Antipyrin.*—[The drug was invariably introduced under the skin—*a*, in rabbits, either in the daily dose of 0·5 gramme, death ensuing on the sixteenth to thirty-first day; or in that of 1·0 gramme, the animal dying in several hours; or in that of 1·5 gramme, death taking place one and a half hour after the injection; *b*, in dogs, in the daily dose of 1·0 gramme, the animals dying on the fifteenth and twentieth day; or in that of 3·0 grammes, death occurring on the next day after a single dose.] The most prominent alterations were these:—1. Intense congestion of the brain and its meninges, with some serous effusion into the cerebral ventricles. 2. Intense congestion of the lungs, with hypostases, the organs having a bright red (as if 'highly arterialised') colour. 3. Dryness, and often a very considerable contraction of the spleen. 4. Congestion of the kidney, sometimes with initial inflammatory lesions. 5. Congestion of the liver, somewhat less frequent comparatively with other changes. 6. The numerical strength of red blood-corpuscles in the beginning increases, but later on sinks, the decrease possibly depending upon a progressive exhaustion of the system. 7. The body's weight steadily falls. II. *Thallin.*—[The drug was used always hypodermically—*a*, in rabbits, in the daily dose of 0·2 gramme, death ensuing on the sixteenth to twenty-eighth day; or in the dose of 0·4 gramme, the animal dying on the next day after the injection; *b*, in dogs, in the daily dose of ⅓rd gramme, death occurring on the twenty-fifth to twenty-eighth day.] 1. Thallin displays a by far more powerful irritant action on animal tissues than antipyrin. 2. In the brain, lungs, spleen, liver, and kidneys there are detected, side by side with intense congestion, quite distinct inflammatory and degenerative changes (in initial stages). 3. The numerical strength of red blood-corpuscles at first somewhat decreases, then temporarily slightly rises, to subsequently fall steadily in a considerable degree. 4. The body's weight is diminished more rapidly and more considerably than in the case of antipyrin. III. *Antifebrin.*—[The drug was administered internally, through a gastric tube, to four dogs, in the daily dose of 2·5 grammes, the animals dying on the twelfth, fifteenth, sixteenth, and twentieth day of the experiment.] 1. Morbid changes are subject to more pronounced individual variations, comparatively with the former two drugs. 2. The brain and lungs are less congested. 3. The liver is sometimes congested, sometimes decidedly anæmic. 4. The spleen is sometimes dry, sometimes normal. 5. The kidneys are more or less congested. 6. The numerical strength of red blood-corpuscles decreases gradually and steadily from the very beginning. Their volume remains unchanged (while under the influence of thallin, and still more under that of antipyrin, it is increased). 8. There is observed a *post mortem* formation of strikingly dense, voluminous, dark blood-clots in the cardiac cavities (which phenomenon is said to be entirely absent in cases of poisoning by antipyrin and thallin). IV. *General conclusions.*—1. Antipyrin, thallin, and antifebrin, when used in large doses, give rise to profound disturbances in the general systemic nutrition, as shown by progressive emaciation and prostration, with falling-out of hair and development of cutaneous ulcers, ending in death. 2. Of the three drugs, thallin appears to be the most, and antifebrin the least, injurious to the organism. 3. The morbid anatomic lesions, as found at the necropsy in fatal cases of the poisonings under consideration, cannot sufficiently explain the actual cause of the animals' death.

1196. *Zantchevsky on Morbid Changes in Poisoning by Cocaine.*—While the physiological and clinical literature of cocaine has attained already truly enormous dimensions, the chapter on morbid lesions arising under the influence of the alkaloid remains yet almost untouched. Hence the practitioner cannot help feeling very grateful to Dr. Vasily M. Zantchevsky of St. Petersburg, who has just published an ably written experimental work (*St. Petersburg Inaugural Dissertation*, 1888, p. 39) aiming to fill up an important gap in our knowledge of a drug which undoubtedly represents the most brilliant acquisition of modern therapeutics. Dr. Zantchevsky's experiments, conducted under the guidance of Professor N. P. Ivanovsky, were made on healthy adult dogs (animals which are fairly sensitive in regard to cocaine, as Professor Anrep has first pointed out) into which (usually Merck's, sometimes Boehringer's) hydrochlorate of cocaine was injected hypodermically. In one group the effects of lethal doses, and in another chronic poisoning, were studied. 1. *Acute poisoning* was induced in five animals whose body's weight varied from 5,000 to 9,100 grammes, by injecting from 0·15 to 0·27 gramme (or 0·03 per 1 kilo) of cocaine, the animals dying in from twenty-five to sixty minutes after the injection. The train of toxic symptoms was fairly uniform. For a few minutes after the injection the dog either did not present anything abnormal, or fell into a kind of stupor; then there appeared dilatation of pupils, restlessness, extreme dyspnœa and accelera-

tion of the pulse, and, in fifteen minutes, attacks of clonic spasms, lasting for half a minute or so, and alternating with paroxysms of typical Cheyne-Stokes' breathing; later on there supervened complete general anæsthesia, dilatation of the palpebral slit, congestion of the conjunctiva, lachrymation, cyanosis, loss of consciousness, incontinence of urine and fæces, stertorous breathing, tremor of the whole body, and progressive failure and retardation of cardiac action. 2. *Chronic poisoning* was brought about in four dogs (weighing from 5,600 to 8,200 grammes) by injecting cocaine in doses gradually ascending from 3 or 4 (about 0·5 per 1 kilo) to 10 or 16 centigrammes a day, the whole amount taken during the experiment varying from 1·08 to 7·8 grammes, and death ensuing in from 43 to 107 days. The initial small doses gave rise to acceleration of breathing and pulse, fleeting (fifteen minutes') general restlessness, also consecutive weakness of the animal's hind limbs, mydriasis, and rise of the rectal temperature (0·3 to 0·5° C.), the symptoms disappearing in about three hours. Increased doses produced the same but ever more pronounced and prolonged symptoms. The 7-centigramme doses induced sometimes *manège* movements of two or three minutes' duration, with extreme restlessness, followed in four hours or so by as extreme weakness and lassitude. The 8-centigramme ones gave rise to stupor, with high dyspnœa, acceleration of the pulse, and mydriasis, of two or three hours' duration. The 1-decigramme doses caused a complete narcosis, rise of the rectal temperature (1° C.), decrease of general sensibility, and other symptoms of acute poisoning. In two of the animals there occurred several attacks of clonic spasms. Both of them died suddenly after a convulsive paroxysm, with consecutive profound prostration. The other two sank gradually from progressive extreme cachexia (which, however, was more or less pronounced also in the former two dogs). III. *Morbid lesions*, either in acute or in chronic poisoning by cocaine, did not represent anything characteristic or pathognomonic. A. *Microscopical Examination.*—In acute poisoning there were invariably found all those alterations which occur in cases of fatal asphyxia—such as dark fluid blood, engorgement of the thoracic veins, dilatation of the right auricle and ventricle of the heart, venous congestion and œdema of the lungs, extravasations under the pleuræ, pericardium, endocardium, and gastric mucous membrane, cyanotic liver, contracted spleen, moderate hyperæmia of the brain and spinal cord, and a more intense one of their meninges. The same changes were present also in those two cases of chronic poisoning which had terminated suddenly, while in the eminently cachectic two cases there were detected extreme anæmia and dryness of all organs except the brain, medulla oblongata, spinal cord, and cerebro-spinal meninges, which were intensely congested. B. *Microscopical Examination.—Blood* did not present any structural changes. *Lungs.*—In acute cases there were present dilatation of the alveolar vessels, with extravasations and occasional collapse of the alveoli; opaque swelling of the alveolar epithelium; hyperæmia and extravasations in bronchioles. *Liver.*—In acute poisoning there were found opaque swelling and granularity of hepatic cells, hydropic and granular degeneration of the epithelium of gall-ducts; serous infiltration of the interlobular connective tissue; engorgement of the interlobular and central veins, with occasional small-sized extravasations in their neighbourhood; and a distinct increase of glycogen in hepatic cells. [The latter statement is in accord with Professor Tarkhan-Mouravoff's observations, according to which large doses of cocaine rapidly give rise in dogs to glycosuria of about five hours' duration; *vide* the *Jürnal dla Normal. i Patolog. Histolog.*, &c., vol. vi.] In chronic intoxication, Dr. Zantchevsky found atrophy and albuminoid degeneration of hepatic cells, atrophy of the interstitial tissue, and atrophic attenuation of vascular walls. *Heart* presented considerable lesions in every one of the cases. In acute poisoning there were found initial signs of albuminoid degeneration of muscular fibres; minute extravasations in the subpericardial and, in a lesser degree, in the subendocardial and interstitial connective tissue; tumefaction of the endothelium of capillaries; opaque swelling and (non-fatty) granularity of many cardiac ganglia, with indistinctness of their nuclei. In cachectic chronic cases the degenerative (albuminoid and fatty) changes were still more pronounced, the muscular fibres having lost their striæ and being intensely granular, while the vessels were empty and their walls atrophied; the cardiac ganglia presented extensive fatty degeneration and atrophy of their cells with vacuolisation of the protoplasm; their nuclei being extremely indistinct. The *medulla oblongata*, and especially the *spinal cord*, proved to have undergone still more profound alterations. In acute cases there was invariably met albuminoid degeneration of ganglionic cells of the medulla oblongata, anterior and posterior horns, Clarke's columns and Roland's gelatinous substance, the spinal changes being especially pronounced in the regions of the cervical and lumbar enlargements. There were found, further, dilatation of perivascular spaces, small extravasations in the grey matter, and occasionally mucoid degeneration of the epithelium of the central canal. In chronic poisoning, side by side with the same (but more intense and more extensive) degenerative lesions, there were detected hyaline degeneration of nerve-cells in the spinal grey matter, engorgement of veins and capillaries (especially in the grey substance), and such changes of vascular walls as proliferation of their nuclei and hyaline degeneration, with consecutive varicosity of the diseased vessels. All those lesions in the medulla and spinal cord had a circumscribed character—that is, were scattered in a patch-like manner over various districts of the organs. Dr. Zantchevsky is inclined to think that 'the degenerative changes arising in the nerve-centres under the influence of cocaine may be partly explained (apart from a still obscure specific action of the alkaloid on the nerve-elements) by a disturbance in the circulation of the central nervous system, which is caused by the drug. In acute poisoning cocaine brings about, in the first instance, a rise of the blood-tension, with a consecutive diminution in the supply of arterial blood; a subsequent fall of the blood-tension and a synchronic disturbance of breathing lead to a profound alteration of the blood in regard to its gaseous ingredients; hence the altered blood becomes an additional irritant agent; and hence there arise disturbances in the nutrition, and degenerative changes of the nerve-cells.' It would be superfluous, of course, to dwell on an extreme sensibility of the nerve-tissue towards any slightest deviation in the circulation or the composition of blood. In conclusion, Dr. Zantchevsky draws attention to a close similarity between the morbid lesions in the nerve-centres as found by him in

cases of the cocaine-poisoning, and those detected by Dr. Cziz in cases of acute and chronic poisoning by morphia and atropia (*Meditz. Pribavl. k' Morsk. Sborn.*, May and June 1883), the difference being only a quantitative one; the former are somewhat milder comparatively with the latter. Perhaps there exists a still greater similarity between the alterations caused by cocaine and those found in the nerve-centres and their blood-vessels in starvation (as described by Drs. V. Mankovsky [the LONDON MEDICAL RECORD, February 1884, p. 73] and V. Rosenbach, in his *St. Petersburg Inaugural Dissertation*, 1883). Judging from that analogy, Dr. Zantchevsky arrives at the general conclusion that 'the cause of those degenerative changes as occur in chronic poisoning by cocaine should be sought in disturbed nutrition of cellular elements, which, in its turn, depends upon lesions of vascular walls, caused by a direct action of the alkaloid.'

V. IDELSON, M.D.

1197. *Tomasini on the Action of Urine and of Urea in Solution on the Movements of Ciliated Epithelium and of Spermatozoa.*—Salvatore Tomasini has investigated (*La Medecina Contemporanea*) the effects of urine, and of nitrate of urea, and of urea, upon the ciliary movements of epithelium from the frog's mouth, from the fresh-water mussel, &c., and of spermatozoa from the guinea-pig. He finds the urine arrests these movements, at whatever time of day it is passed, and whether it be alkaline or acid; but that this is effected most quickly when the urine is very acid or very ammoniacal; the arrest taking some minutes to effect in neutral or feeble acid urine. Spermatozoa are more readily effected than ciliated epithelium. The arresting substance appears to be the urea. In solution in the urine its action is not so powerful as in the form of the chemically pure nitrate or urea itself; this last in a 1 in 5,000 solution sensibly diminishes the movements of spermatozoa. Tomasini finds that with nitrate of urea a 2 per 1,000 solution arrests epithelial ciliary movements directly; a 1 per 1,000 solution takes two or three minutes to act, and a ½ per 1,000 solution does not arrest at all; but that a 1 per 1,000 solution immediately arrests the movements of spermatozoa.

1198. *Errico on Oscillations of the Body during Walking.*—Dr. De Renzi Errico publishes a preliminary note on the results of his recent investigations upon the oscillations of the body during walking. He has succeeded in recording the movements graphically by means of a style or small sponge charged with ink, placed upon the head of the walker, which marks the oscillations upon a paper overhead. He states that lateral oscillations are always present when the walker is in perfect health. Alcohol, not taken in such quantities as to produce drunkenness, sensibly enlarges the amplitude of the oscillation. Plantar anæsthesia (*sic*) does not do so to the extent expected *à priori*. Grave anæmia is associated with a very notable lateral oscillation, which disappears on recovery. Dr. Errico has also investigated these oscillations in chorea, hysteria, disseminated sclerosis, &c.

WALTER PYE.

1199. *Dastre and Pampoukis on the Effect of Balancing on Respiration.*—1. During gentle reversal of position in an animal (dog) the energy of the inspiratory effort is increased, and the diaphragm preserves a certain degree of permanent contraction. The organism thus exercises a sort of reaction, which antagonises the diminution of respiratory space, which change of position tends to produce. 2. This reaction is only temporary. When the upside-down position is maintained for some time, the thoracic respiration undergoes a definite diminution. The contraction of the diaphragm persists for a longer time, but grows weaker. 3. In rhythmical balancing the artificial rhythm imposes itself upon the inspiratory actions of the thorax, and replaces the normal rhythm. Secondary modifications show themselves in the form and duration of the respirations. 4. The most noticeable fact which results from rhythmical balancing is a discord between the movements of the thorax and those of the diaphragm, the thoracic and abdominal movements no longer harmonising. The contractions of the diaphragm are prolonged and retarded, the muscle not returning to its normal position of repose. 5. Experiments made on the rabbit manifest the extreme motility of the mass of viscera, and the considerable influence which this motility exercises on respiration. Balancing may have the effect of substituting for the normal active respiration a sort of passive artificial respiration, due to the to and fro movements of the mass of the viscera. 6. Displacements of the viscera are more easily made towards the thorax than towards the pelvis. The diaphragm in the period of upturning obeys without interruption the pressure of the intestinal mass; in the period of restitution, on the contrary, the abdominal wall only slowly receives this pressure under the form of a smart shock. In the living subject the violence of this shock is avoided by the constant contraction of the diaphragm. 7. Abdominal compression is much less efficacious than would *à priori* be supposed, in limiting the movements of the intestinal mass, and diminishing the shocks against the diaphragm.

1200. *Dastre and Loye on Transfusion.*—1. It is possible to inject successively into the veins of a rabbit considerable quantities of normal salt solution, without producing any immediate or consecutive trouble. In some experiments the amount of fluid injected was two-thirds the weight of the animal. 2. The expression 'toxic dose' has no meaning so far as it relates to the normal salt solution. There is, however, a toxic rapidity. The quantity of the solution introduced must not exceed 3 cubic centimètres per minute and per kilogramme of the animal's weight. 3. The innocuousness of the experiment requires extrinsic conditions—viz., moderate rapidity and amount, and intrinsic, relative to the good condition of the organs, and especially of the kidneys. 4. When these conditions are not fulfilled, the animal succumbs more or less slowly; there are then to be observed exudations in the serous cavities, exophthalmia, and hæmorrhages in the mucous surfaces. 5. When the urinary excretion is observed, it will be found that it increases *pari passu* with the injection. This parallelism is shown by graphic illustrations. 6. This proves the existence of a mechanism for regulating the amount of water in the organisation. This mechanism comes into play perfectly when the quantity of salt solution injected equals the quantity of blood in the animal prior to the experiment. The surplus is immediately rejected. 7. The quantity equal in amount to the blood of the animal is divided into two portions. About 25 per cent. remains in the circulatory apparatus during the time of the experiment, being definitely eliminated later on. About 75 per cent. escapes temporarily into the serous cavities and the tissues, also being

eliminated later. 8. These facts show a physiological relation between the circulatory and serous systems which is in relation to the conservation of the aqueous equilibrium of the blood and of the tissues. 9. Analyses show that when the animal has returned to the normal condition, the injection of the normal salt solution has produced no other effect than that of a washing out of the blood and of the tissues.

1201. *Smith on the Escape of Fluid from the Eye.* Mr. Smith, by means of an instrument devised by himself, has made a number of experiments relating to this subject. These were divided into two series—viz., 1. *Single injections*, in which the fluid was injected into one chamber only, vitreous or aqueous, as the case might be; the two fellow eyes of the same animal were usually experimented on at the same time, the one receiving the injection in the aqueous, the other in the vitreous chamber. 2. *Double injections*, in which the fluid was injected into both chambers simultaneously, the pressures being equal or different, according to the object of the experiment. The fluid used in almost all cases was water containing aniline blue in solution, so as to render visible the injection of the ciliary vessels or any other outlets through which it might escape. A pressure of 30 centimètres (=25 millimètres of mercury) was adopted as the standard pressure throughout, this being probably the average normal pressure in man, and some, at least, of the lower animals. It was noted that considerable differences exist between eyes taken from individuals of the same species, small differences being presented by the two eyes of one individual. The escape decreases gradually, owing partly to loss of heat. In freshly excised eyes the first series of experiments show—1. That the escape of fluid from the eye is about three times more rapid during injection into the anterior chamber than during injection into the vitreous chamber. 2. That the escape of fluid at the back of the eye is extremely small as compared with the escape in the ciliary region. They suggest also—3. That the escape from both chambers, during such injections, is influenced by the more or less advanced position of the iris base. The second series of experiments prove this to be actually the case. They also show that much less fluid escapes from the eye during simultaneous injection of both chambers than during injection of the aqueous chamber alone. The experiments show that escape from the papilla must be extremely small in amount as compared with that from the anterior chamber. They also show that fluid passes easily from the vitreous to the aqueous chamber under a very slight excess of pressure on one side of the diaphragm. It seems certain that, so long as the diaphragm remains permeable, and the intra-ocular fluid diffusible, any tendency to excess in either chamber would be quickly neutralised by osmosis into the other, an arrangement which is, no doubt, essential to the stability of the lens in its proper position. If the normal stream of fluid which enters the vitreous from the ciliary body is of larger amount than the minute stream which escapes around the central vessels of the optic nerve, then, unquestionably, the surplus, whatever it may be, escapes through the anterior chamber.

1202. *Mosso on the Use of Methyl-green in the Examination of Cells.*—A 5 per cent. solution of methyl-green in a 75 per cent. solution of salt retards considerably the coagulation of the blood, even if only 2 cubic centimètres are added to 40 cubic centimètres of blood. If 3 or 4 cubic centimètres of the solution are added to 40 cubic centimètres of blood, coagulation does not take place. The leucocytes of the uncoagulated blood, mixed with methyl-green, are uncoloured in their substance, and show in their interior the so-called nuclei, coloured green. In some the green substance extends over all, and fills the whole corpuscle. Other leucocytes, on the contrary, are completely coloured; but the greatest part of the blood-corpuscle is violet, without a trace of the so-called nuclei. If 5 or 6 cubic centimètres of a 5 per cent. methyl-green solution are mixed with 40 cubic centimètres of blood, taken directly from the artery, it is easily seen that the methyl-green is destroyed. The microscopic examination shows that the intensity of the colouring of the blood-corpuscles and the serum does not correspond to the quantity of methyl-green mixed with the blood, and that many leucocytes remain white. If now acetic acid is added to this blood in whatsoever proportion, and it is diluted with water, the characteristic green colour is no more to be seen. This shows that the diminution of the green colour cannot be attributed to the alkalinity of the blood. The writer considers that methyl-green in contact with the blood is discoloured by an oxidation process, and tried whether the same phenomenon could not be produced by peroxide of hydrogen. The results obtained agreed completely with this theory.

Bertram C. A. Windle, M.D.

1203. *Gaucher, Combemale, and Marestang on the Physiological Action of Edwigia Balsamifera.*—The Edwigia Balsamifera belongs to the natural order of the Terebinthaceæ, growing on the Antilles. Sixteen milligrammes ($\frac{1}{4}$ grain) of the alcoholic extract, administered subcutaneously to the guinea-pig, was sufficient to cause death. The effects produced were—(1) marked and rapid lowering of temperature; (2) paresis of the hinder extremities, with convulsions and dilatation of the pupil; (3) vaso-motor disturbances; (4) irregularity of pulse and respiration. *Post mortem*, pulmonary and visceral congestion were well marked.

1204. *Bremond, Fils, on the Eutrophic Action of Turpentine.*—Dr. Bremond discusses the effect of the turpentine treatment on the richness of the blood in oxyhæmoglobin, and the reduction of this subject in anæmic patients. In one young person, who only showed 3·5 per cent. at the beginning of the treatment, an augmentation of 1 per cent. was found, ultimately rising to a total of 6 per cent. The increase in the proportion of oxyhæmoglobin was always more rapid and greater the nearer the proportion at the beginning approximated to the normal—*i.e.* 14 per cent. The results obtained in phthisical patients show the action of the drug in the treatment of maladies accompanied by imperfect assimilation.

1205. *Rietsch on Experimental Tetanus.*—Taking as a starting-point the dust of hay, the author succeeded in infecting an ass with the typical tetanus of the equides. The dust was also inserted beneath the skin of four guinea-pigs, which all died of tetanus between the fourth and the fifth days, death being preceded by convulsions. Pus taken from the site of the injections killed two other guinea-pigs in about thirty hours with the same symptoms. From the second series of inoculations two more guinea-pigs were inoculated, and the pus also served to establish cultivations in serum and in gelatine. For these inoculations very small quantities of pus were used, with the result that one animal

escaped altogether, while the other exhibited tetanic symptoms on the fourth day, from which it eventually recovered. The serum cultivations, kept at 35° C., contained a variety of microbes, in which, however, the thin, straight bacillus predominated. These cultivations were subjected to a temperature of 100° C. for five minutes, and then replaced in the warm chamber at 35° C. The serum, coagulated by the heat, began to liquefy in forty-eight hours, but contained little else than big, short bacilli, the bacillus of tetanus being comparatively rare. Five days later, however—*i.e.* after seven days' incubation—the latter bacillus was found in great abundance in four tubes out of five. The liquid part of one of these tubes, mixed with from five to six times its volume of water, was then injected beneath the skin of an ass. The appetite began to fail towards the fifth day, but no other symptom was noticed for a fortnight. On the fifteenth day the animal suddenly ceased to eat, and the hind legs became stiffened, this symptom becoming more marked day by day. Trismus was well marked, and the animal died on the twenty-second day after the inoculation. With different parts of the ass the following experiments were performed: 1. Two rabbits inoculated with the blood manifested no symptoms whatever; 2. Two rabbits inoculated with the liver pulp, died of septicæmia without tetanic symptoms; 3. Four rabbits inoculated with pus and with tissues bordering the abscess, died of tetanus. The experimental tetanus of the equides would therefore appear to differ in no wise from spontaneous (idiopathic) tetanus. ALFRED S. GUBB.

1206. *Schreiber on the Spontaneous Secretions of the Fasting Stomach.*—All the various theories of late adopted in gastric physiology and pathology proceed on the assumption that the stomach does not secrete anything when empty of food. The same is asserted in text-books of physiology; and Beaumont's observations on St. Martin, who had a gastric fistula, were supposed to be conclusive on the subject. Observers of a previous age all thought the contrary—viz., that the stomach went on secreting gastric juice whether full or empty, and even Réaumur and Spallanzani took this view. But all modern observations have been obtained either from animals or from fistulous individuals; and Professor Schreiber has instituted an examination into this subject, taking normal perfectly healthy individuals for observation. C. A. Ewald, F. Riegel, Leube, and Edinger all expressly state that the fasting stomach contains no juice, certainly no HCl; but one physiologist, Heidenhain, states that secretion, though it ceases at the end of digestion, slowly begins again if the stomach remains empty. A Nelaton's sound was used (a small soft sound easily 'swallowed'), and undiluted gastric juice was obtained in each case by Ewald's very simple 'expression method,' the patient putting in action the abdominal muscles. Gunzburg's phloroglucin-vanillin test was used, a few drops of distilled water being previously passed down the tube (after removal from the mouth) so as to wash out any secretion. In some of the cases litmus or congo papers were used. The sound was only introduced long enough to allow of the effort of expression being made—*i.e.* only a few seconds, therefore not long enough to set up secretion by irritation of the gastric wall. As to HCl, 37 observations were made on 15 persons, 5 of whom were students, and the results are given in a table. Of the 15 persons, 14 gave the HCl reaction of the gastric mucous membrane in the fasting condition—*i.e.* HCl was proved to be present in 93 per cent. Of 34 observations on the 14 persons, HCl was found 30 times, and the test was negative 4 times. Further, in the cases in which sufficient gastric juice was obtained, a digestion-test was used, with a positive result—viz., the solution of albumen. Therefore pepsine was present as well as HCl. Of course more or less saliva must have been present in the stomach, swallowed during sleep and afterwards. But saliva is from time to time being swallowed; it is the normal condition, and its presence must be accepted as a fact. It would be perhaps impossible to obtain pure gastric juice from a fasting stomach without salivary secretion admixed, and even if obtained such a secretion would be abnormal. The quantity of HCl lay between 0·5 and 1·8 per mille. In the preceding observations, the stomach in each case was examined at 8—9 in the morning, the patient having not eaten or drunk anything since the previous evening, or even rinsed out his mouth. In another set of observations, eleven individuals were kept fasting during more or less of the day, three of them up to 3 P.M. With one exception, a boy whose stomach yielded a yellowish green fluid and therefore 'functioned' abnormally, evidence of HCl was obtained in all the cases, the amount (when ascertained) being rather greater than before. This previous amount was only slightly below the normal proportion as found by Riegel towards the end of digestion. E. J. EDWARDES, M.D.

1207. *Rossi and Agostini on the Action of Bromide of Potassium on the Nervous Centres.*—Only a preliminary report has been published of the experiments, which are still being continued. The authors gave 60 grains of bromide of potassium daily to a dog weighing about 10 lbs. After five or six days it showed some difficulty in movement, and tremor. Later there appeared paralysis of the fore limbs, and afterwards of the hind limbs, with loss of appetite, diminished sensibility, torpor, and at the end of fifteen days, death. A chemical examination showed the presence of bromine salts in the brain and cord. Microscopically they found evidence of considerable vascular dilatation, with hæmorrhages into the vascular sheaths, and into the nervous tissue. In the cord there was in addition some swelling of the white fibres and occasional solution of continuity.

1208. *Tansini on the Effect of opening Visceral Cavities on the Action of the Heart.*—The author calls attention to the importance of the knowledge on the part of the surgeon of the effect on the cardiac action of opening the various visceral cavities. In addition to the knowledge of the effect of abdominal wounds we have the results of the experiments of Brown-Séquard, Claude Bernard, Bernstein, Goltz, and De Tarchanoff, who show that irritation of the nerves in the cavity of the abdomen produces a reflex arrest of the action of the heart; and Tarchanoff has stated that this arrest takes place more readily if the nerves are already excited by an inflammatory process. The author has experimented on healthy dogs and rabbits, and has collected a long series of records of the speed of the heart's action, the blood pressure, &c. In this preliminary notice he makes the following statements. After opening the cavity of the abdomen, and exposing the intestines to the air, there is always a

slowing of the heart's action, followed by a temporary increased action when the surroundings are cold, and the exposed intestine becomes anæmic. And this again is followed by a notable depression, lasting for 10 or 20 hours. If the surroundings are kept warm the slowing of the heart is more gradual, and the final depression is not so severe, though lasting just as long. There is no intermediate rise in speed and energy. If the intestines are wrapped up in warm cloths the activity of the heart is stimulated, but not much; and depression still sets in speedily and the temperature falls. On opening the cavity of the chest, or, more strictly, the right pleural cavity, without any manipulation of, or injury to, the lung, there is observed a rise in the activity of the heart. It is not so much an increase in speed as in the force of the heart's action, but soon irregularity is apt to supervene. On opening the cavity of the cranium, without injury to the brain, but after incising the dura mater, an immediate depression of the heart's action is noticed; but this depression does not increase, though the cranial cavity be kept exposed for one, two, or more hours. In fact, it tends to diminish, and the tracing eventually resembles that made before the head was opened. The same results were obtained both with and without an anæsthetic. H. HANDFORD, M.D.

BACTERIOLOGY.

RECENT PAPERS.

1209. CORNIL, M.—On Tuberculosis of Mucous Membranes. (*Bulletin Médical*, July 29, 1888.)

1210. SOLLES, DR.—On an Organism (not Koch's Bacillus) derived from the Human Tuberculous Lung. (*Bulletin Médical*, July 29, 1888.)

1211. JACCOUD, PROFESSOR.—On the Effect of Hydrofluoric Acid on the Bacillus Tuberculosis. (*Bulletin Médical*, Oct. 31, 1888.)

1212. TROUP, FRANCIS, M.D., M.R.C.P.Edin.—The Diagnosis of Early Phthisis by the Microscope. (*Edin. Med. Jour.*, July 1888.)

1213. MACNAMARA.—On Tubercle-Bacillus. (*Dublin Journal of Medical Science*, Nov. 1, 1888.)

1214. GRABOVSKAIA, DR. M. P.—Origin of Fever in Hæmatocolpus. (*Vratch*, No. 21, 1888, p. 401.)

ART. 1209. *Cornil on Tuberculosis of Mucous Membranes.*—The author points out that, in order to become tuberculous, mucous surfaces need not present any fissures, excoriations, or ulcerations, or other solutions of continuity. It is quite sufficient if the virus be allowed to remain in contact with the unabraded surface. He administered cultivations of the specific bacillus to guinea-pigs, and found that fifteen days later tubercles were already visible to the naked eye in the intestines. No diarrhœa and no epithelial desquamation. The examination of a number of tuberculous uteri lead him to suppose that infection may result from sexual connection. In guinea-pigs the intravaginal injection of bacillary cultures resulted in the development of tubercles in the uterus.

1210. *Solles on an Organism (not Koch's Bacillus) derived from the Human Tuberculous Lung.*—Animals inoculated with this particular organism, contained in the tuberculous lung of human beings, die in from four months to a year, of a malady quite distinct from tuberculosis both in the lesions and in the reactions of the organism which gives rise to them. This organism, considered hitherto to be accidental, is not the bacillus tuberculosis of Koch, and does not react to Ehrlich's test. It may be cultivated in rabbit's blood, and remains constantly the same. It is present in the expectoration and blood of phthisical subjects.

1211. *Jaccoud on the Effect of Hydrofluoric Acid on the Bacillus Tuberculosis.*—Four guinea-pigs were inoculated with the sputa of phthisical patients, and six with sputum which had been subjected to the influence of hydrofluoric acid of various strengths for forty-five minutes. Two only of the four control animals succumbed to general tuberculosis, while all the six animals inoculated with the sputum subjected to the hydrofluoric acid developed symptoms of general tuberculosis within from five to eight weeks, even more severely than the others. It is evident, therefore, that hydrofluoric acid, in solution, in no wise modifies the virulence of the tubercle-bacillus. Experiments were then carried out with the pure vapour of hydrofluoric acid, and showed that the latter really possessed the power of sterilising tuberculous sputa; but the observation is devoid of any practical value, inasmuch as the idea of introducing the pure acid into the organism could not be entertained. ALFRED S. GUBB.

1212. *Troup on the Diagnosis of Early Phthisis by the Microscope.*—In a paper read before the Edinburgh Medico-Chirurgical Society, Dr. Troup invites closer attention to the diagnostic value of systematic examination of the sputa in all cases of phthisis. The essential features to be sought for are the tubercle-bacillus and the normal elastic tissue. At the outset of his paper the author shortly sums up the extent of ignorance on the exact conditions of body which favour the development of the bacilli in a phthisical lung, and shows that the influence of catarrh in general is but very small, although it may be all powerful in the 'phthisical subject.' The extent to which the bacillus can enter the body by inhalation has been proved by experiment to be very slight, as might be expected from the fact that the foreign pigmentary bodies which colour the lung in later life are very slow to make their appearance in earlier years. Even in the breath of persons suffering from active phthisis it has not been found easy to demonstrate the presence of the bacillus, and hence we must look to other channels as the most frequent points of entry. Dr. Troup suggests the milk of tuberculous mothers, the milk or flesh of tuberculous animals, and the possibility of direct inheritance as means whereby the bacillus may gain access to the human body, but he leaves these points as suggestions only, and proceeds to discuss the importance of the recognition of the bacillus in the diagnosis of phthisis. He does not believe that the number of bacilli in any given case is a true index of the intensity of the disease, but notes that in the most rapidly progressive cases, numbers of bacilli are to be found which are more beaded than those generally observed in the chronic cases, and that these are sometimes accompanied by definite forms of cocci and diplococci. In examining sputa he recommends that they be taken as fresh as possible and stained by the carbol-fuchsine method of the Neelsen solution; and, although examination by means of condensed

light is an advantage, he shows that it is by no means an essential. The means of rendering the bacilli visible are now so trustworthy that he would regard the failure of a competent observer to find any specimens of them as a proof of their non-existence. The systematic search for elastic tissue in all cases of early or doubtful phthisis is insisted on somewhat warmly, the sputa being examined directly, without the previous boiling which has been sometimes considered necessary. A little experience will show in which part of the sputa the elastic fibres are most likely to exist, and these can be examined by a moderate power in a 30 per cent. solution of caustic potash.

1213. *Macnamara on Tubercle-Bacillus.*—Mr. C. E. Macnamara (British Guiana) reviews the various theories with respect to the tubercle-bacillus, and brings forward the following suggestions as addenda to the 'physiological misery' theory of Bouchardat. He regards the tubercle-bacillus as it is now recognised as only one revelation in its life history, and believes that a definite host is necessary for its development into the state in which we see it. He compares its possible life history to that of the bothriocephalus latus. The conditions which favour its development would seem to be those of the 'physiological misery' which is implied under the comprehensive name of strumous or tubercular diathesis. In British Guiana he finds that phthisis is for the most part associated with so-called malarial influences, which are in reality nothing more than sanitary defects, and with the condition which he suggestively describes as 'pneumonia alcoholica.' He lays especial stress upon the fact that both defective sanitation and alcoholic excess must of necessity affect the excretory function of the lungs, and thereby render them more fitted for the seat and pabulum of the spores or germs of the tubercular virus. Just as food, he argues, may become the host of intestinal parasites in an alternate stage, so the atmospheric air may be the alternate host of the organism which in the appropriate state of the human lung may become developed into the tubercle-bacillus. E. CLIFFORD BEALE, M.B.

1214. *Grabovskaia on the Streptococcus Pyogenes in Hæmatocolpus.*—In the *Vratch*, No. 21, 1888, p. 401, Dr. M. P. Grabovskaia, lady physician to the Town Hospital in Tobolsk (West Siberia), publishes a case of hæmatocolpus, presenting a high theoretical and practical interest. An extremely anæmic and exhausted girl, 14 years of age, was admitted on account of an intense constant hypogastric pain, difficult micturition, constipation, and increasing emaciation and prostration, the symptoms being of about two months' duration. On examination, there were found considerable abdominal distension and tenderness, fever (38°·8 C.), and weak and small pulse (100 per 1'). The vagina proved to be totally closed with a smooth highly congested and dense membrane, without any trace of opening; neither could the author detect any excoriations or ulcers either about the imperforate hymen or other external genitals. Fluctuation having been felt through the membrane and the rectum, hæmatocolpus was diagnosed, and the writer resolved to operate without delay. Previously, however, she extracted a portion of the pent-up fluid by means of a trocar, under all most scrupulous sterilising precautions. The membrane (4 millimètres thick) was opened by a longitudinal incision, 2 centimètres long, to which a short transverse one was added. About 500 cubic centimètres of a chocolate-coloured, syrup-like, slightly viscid, odourless fluid escaped. The vaginal cavity freely admitted a middle-sized fist, its walls being quite smooth and, at the site of the fornix, meeting together to form a funnel-shaped depression with a very small button-like vaginal portion at the apex. The after-treatment consisted in washing out the vagina with a $\frac{1}{20}$th per cent. solution of sublimate corrosive, and plugging with an antipyrin and iodoform tampon. For the first two days the evening temperature varied between 38°·4 and 38°·6 C. to descend subsequently to the normal standard. On the 9th day she got up; on the 12th, discharged without any former local complaints. The above-mentioned portion of the fluid was subjected to microscopic and bacterioscopic examination about 15 minutes after its extraction. It was found to contain, beside a mass of disintegrated red blood-corpuscles and naked nuclei of leucocytes, great numbers of short chains, composed of the cocci most closely resembling Rosenbach's streptococcus pyogenes, the longest chains consisting of from 8 to 15 links. To finally determine their species, one drop of the fluid was placed in liquefied meat peptone agar, in a cup at 36° C., and another into a 6 per cent. liquefied meat peptone gelatine to be spread over plates. In 24 hours, the agar specimen gave a number of minute round, delicate, equal and homogeneous, whitish colonies closely crowding over the medium, and consisting of beautifully developed long chains of the streptococcus. On the 3rd day, similar colonies appeared likewise on the jelly. In test-tubes with meat peptone agar, a well-known characteristic growth resembling a fern leaf, was obtained; on meat peptone jelly the microbes, inoculated by puncture, grew slowly, without liquefying the medium. In short, Dr. Grabovskaia had to deal, beyond any doubt, with a pure culture of the streptococcus pyogenes. The microbe was found also in the patient's vaginal secretion on the 2nd day after the operation, the discharge being then thick, yellowish-grey, purulent. On the 3rd day, it became scanty and muco-purulent, and proved to be quite free from any micro-organisms (as a microscopical examination and cultivation experiments showed), while the temperature simultaneously returned to the normal. Dr. Grabovskaia's case, therefore, establishes the fact that a pathogenic microbe of suppuration may develop, in a pure culture, within a hermetically closed cavity of the body having no communication whatever either with the outer air or with the patient's rectum or bladder. How the streptococcus could get into the woman's vaginal cavity, the writer does not even attempt to answer. But she feels sure that febrile movements and even peritonitis, as observed in some cases of hæmatocolpus, hæmatometra, and hæmatosalpinx, can be now explained by the presence of the microbe. She emphasises, further, that 'her case enforces, on surgical interference for hæmatocolpus, not only the necessity of an *aseptic* performance of the operation, but also that of using *antiseptic* measures all through, for there exists a possibility of an auto-infection in the strictest sense of the word.' 'It is just possible'—she adds in conclusion—'that the surgeon may sometimes, quite wrongly, accuse himself of his having been not sufficiently careful in regard to asepticism of his operation, while in reality the source of septic infection in the case given, is hidden somewhere within his patient's system.'

V. IDELSON, M.D.

DISEASES OF THE NERVOUS SYSTEM.

RECENT PAPERS.

1215. Pitres, Prof. Dr. A.—A Case of Pseudo-tabes (*Sur un cas de Pseudo-tabes*). (*Archiv. de Neurol.*, vol. xv., May 1888.)

1216. Neumann, Dr. E.—On So-called Facial Paralysis from Cold (*Nouvelles études sur le rôle de la prédisposition nerveuse dans l'étiologie de la paralysie faciale dite à frigore*). (*Archiv. de Neurol.*, vol. xv., 1888.)

1217. Putnam, Dr. James J.—On Motor Paralysis and other Symptoms from Medicinal Doses of Arsenic. (*Boston Med. and Surg. Jour.*, July 5, 1888.)

1218. Mabille, Dr. H.—Perforating Ulcer in a Case of General Paralysis (*Mal perforant chez un paralytique général*). (*Archiv. de Neurol.*, vol. xvi., 1888.)

1219. Bourneville and Pilliet.—Two Cases of Double Athetosis with Imbecility (*Deux cas d'Athétose double avec Imbécilité*). (*Archiv. de Neurol.*, vol. xv., 1888.)

1220. Stewart, Dr.—A Case of Epileptiform Convulsions following the use of Cocaine as an Urethral Anæsthetic. (*Med. Progress*, Aug. 18, 1888.)

Art. 1215. *Pitres on a Case of Pseudo-tabes.*—The main features of the case are thus enumerated by the author:—'Symptoms of progressive locomotor ataxy persisting ten years; absence of sclerosis of the posterior columns of the spinal cord; complete integrity of the spinal nerve-roots and peripheral nerves.' Duchenne, who first differentiated locomotor ataxy, used these words with regard to it; 'progressive abolition of the co-ordination of movements, and apparent paralysis, contrasting with integrity of muscular force, these are the fundamental characteristics, though incomplete, of the malady that I am about to describe. Its symptoms and course make it a perfectly distinct disease.' So far its specificity was purely symptomatic, but later on the usual diseased process in the spinal cord was observed and this lesion was then so intimately associated in the mind with the symptoms, that the terms 'tabes dorsalis' and 'progressive locomotor ataxy' have been long used indifferently to mean the same thing. But the right to do this has never been made clear, and it is in fact contradicted by two facts, viz., the occasional presence of sclerosis in the posterior columns without precedent symptoms of ataxy, and *vice versâ*, the occasional presence of typical locomotor ataxy, while the autopsy has revealed no appreciable alteration of the spinal cord. Trousseau called this disease a pure neurosis. Axenfeld, with more prudence, considered that its interpretation must be deferred. The labours of Charcot and Pierret proved that the posterior columns must be divided into two vertical parts; one more central (column of Goll on each side) which might be sclerosed throughout without ataxy, the other external to this (external root-zone) the true seat of 'tabes dorsalis.' Multiple neuritis, disseminated here and there throughout the system, may also cause all the symptoms of locomotor ataxy (Déjerine's 'Nervo-Tabes Périphérique'). Still cases occur in which neither spinal nor peripheral nerve-alteration is found, and some authors (Rockwill, Kowalewski, &c.) have assumed that 'spinal irritation' might account for the symptoms in such cases. Leval-Piquechef (*Thèse Doct.*, Paris, 1885), gives four cases of pseudo-tabes, which all recovered perfectly in a few weeks. Dr. Pitres' case lasted ten years, and the following is a synopsis:—Patient, a man, aged 44, no inherited nervous disease, no syphilis, and no alcoholism, but habitual venereal excesses. In 1876, at the age of 35, attacks of muscular curvature in the loins. In 1887 attacks of sharp lancinating pains, seated at first in the right hip, later on extending to the left; polyuria. In 1880, girdle-pains; uncertainty in walking; feeling of swelling of feet, and of numbness and prickings. Romberg's symptom. Genital excitation followed by frigidity. From 1881 to 1886 bladder trouble, rectal tenesmus, 'crises gastriques.' Typical lightning pains. Persistence of motor incoordination. No visual and no trophic derangements. Knee-jerks retained. Death from tubercular pleurisy. Autopsy: No spinal sclerosis; no atrophy of the posterior roots; integrity of the peripheral nerves. It should be added that the sensation of the position of the lower limbs was well preserved, but when the eyes were closed the patient said it always took him a moment to make out the position of his feet if passively shifted. He never lost the sensation of his legs in bed. Cutaneous sensibility was blunted, and the sensations were delayed. The reflexes were all preserved, but the right cremasteric was somewhat stronger than the left; the right testicle was partially atrophied. The pupils were equal, and reacted well to light and accommodation-efforts. The visual acuteness was good. Later on, in 1885, the cutaneous sensibility was more blunted than before, the plantar reflexes were lost, the right knee-jerk was rather below normal, the left was normal, there was no dystrophia of the skin or nails, no muscular atrophy, and no derangement of the taste, hearing, or smell. There was slight myosis. At the autopsy the right pleural cavity held about a litre of bloody liquid, and the false membranes about it showed an abundance of miliary granulations, which were also scattered throughout both lungs. Other organs, including the brain and its coverings, were all healthy. The spinal was carefully examined, both by the naked eye and by the aid of the microscope, after hardening in two per cent. ammon. bichrom., but nothing abnormal was discovered indicating sclerosis. 'The only peculiarity worthy of mention is that the vascular walls were rather harder and thicker than usual throughout the cord, in other words there was slight diffused periarteritis.' But the adjacent connective tissue was not involved. This alteration was perhaps more evident in the posterior columns and posterior coruna, but it was present also in the lateral columns and anterior coruna. Four pairs of spinal nerve-roots were examined, with a negative result, also fragments of twelve peripheral nerves. Amongst the visceral nerves, the great splanchnics, the vagi, the right and left superior laryngeals, the right recurrent, and the right phrenic were healthy. But the left recurrent showed great alterations, being composed entirely of atrophied fibres, of a ribboned character, and difficult to isolate. The gastric and cardiac nerves were similarly altered, showing atrophied in place of myelinic fibres. The man was a foreman in a foundry. He had passed part of his childhood in Louisiana, and had afterwards lived in Senegal, but never had yellow fever or intermittent fever. He afterwards became a soldier in France, and had gonorrhœa twice, but never contracted any chancre. He was a good deal knocked about in the Franco-German war and subjected to great cold, but his

health was always fairly good, and he remained well up to 1876. He had never been addicted to alcohol. In commenting on this case, Professor Pitres thinks that simulation was out of the question, the symptoms were too clear and too prolonged, and it was not the man's interest to simulate. Functional disturbances caused a train of symptoms like those due to tabes. 'In short, it is no more surprising to meet with pseudo-tabes than with pseudo-sclerosis-en-plaques, or pseudo-bulbar-paralysis, or pseudo-apoplexy.' Our pathological knowledge does not as yet admit an explanation of such cases as the above.

1216. *Neumann on So-called Facial Paralysis from Cold.*—Seventeen cases were reported by Dr. Neumann in the *Archives de Neurolgie*, July 1887, and the present number contains twenty-four in addition, all going to prove the part which hereditary nervous predisposition plays in the causation of so-called facial paralysis *à frigore*. The list of twenty-four is closed by five cases of a very remarkable character, inasmuch as they all belong to the same family, and extended through three successive generations. This series of five cases is reported by Professor Charcot, and the following is the relationship. A. First generation—(1) Mdme. A., æt. 60. Complete facial paralysis (left), ending in contracture. Neuropathic. (2) A sister of the above, æt. 70. Neuropathic; intercostal neuralgias, left sciatica. Complete (left) facial paralysis, ending in cure. (3) Another sister, æt. 57. Complete (right) facial paralysis; cured in three months. B. Second generation—(4) M. M., æt. 42, son of No. 2, and married to the daughter of Mdme. A. Ataxia. Left facial paralysis, after a chill; cured in fifteen days. Third generation—(5) A daughter of No. 4, æt. 16. Complete (left) facial paralysis, after a chill; cured in a month. (A son, æt. 13, was choreic.) The above five cases are the most striking of the twenty-four. The facts speak for themselves. In the other cases, as reported by the author, various neuropathics existed. One patient with left facial paralysis had had the right side similarly affected two years previously, ending in cure in three months. Morbius has observed three cases of relapse of this disease, and Charcot cites a woman who had four distinct attacks of Bell's paralysis, alternating from the right side to the left. Professor Froschel, of Kief, has recently published a case of relapse of this kind. In two of the author's cases it was found that ataxy had existed in the fathers; in another case the patient, a man, æt. 37, was ataxic himself. This latter case belongs to Professor Charcot, and was communicated by M. Blocq. The facial hemiplegia here was evidently of tabetic origin. The author believes that facial paralysis rarely or never occurs amongst non-neurotic subjects.

1217. *Putnam on Motor Paralysis and other Symptoms of Poisoning from Medicinal Doses of Arsenic.*—The following is an abstract of Dr. J. J. Putnam's paper. The patient was a man, past middle life, 'attacked with widespread muscular paresis attended by moderate atrophy, affecting mainly the muscles which move the extremities on the trunks, but also to some extent those of the distal portions of the limbs; rapidly progressive for five months, then retrogressive; characterised by moderate diminution of electrical irritability to both currents, and by increased mechanical irritability; preceded and accompanied by severe rheumatoid pains about the joints, but without other marked disorders of the sensory system; and associated with symptoms of considerable and persistent drowsiness and general depression of the nervous energy, and we find also the urine containing an unmistakable trace of arsenic, which must have come, so far as is known, either from the wall-paper during October and November, or from the therapeutic doses of Fowler's solution which had been taken five months before.' The figures for a portion of the faradic reactions are as follows, in millimètres:—Right thenar eminence 115, left 105; right hypothenar eminence 115, left 105; extens. com. digit. 90; extensor carpi radialis 100; deltoid (contractions excessively feeble) 100; biceps (similar) 100 to 120. The galvanic current revealed no reaction of degeneration. The patient was rapidly improving at the time the paper was read (before the Suffolk District Medical Society), so that the various myopathies of spinal origin were eliminated from the diagnosis. There remained, as possible diagnoses, acute multiple neuritis and acute myositis. Acute myositis is rare, and usually rapidly fatal. It is more common in this disease than in neuritis to see the larger muscles principally affected. 'Only a few cases of this clinical type, and ending in recovery, have been reported, and there is some doubt whether part of these were not cases of neuritis. The case reported to-night seems to me to belong to this obscure class. The evidence in favour of the arsenical origin has been materially weakened . . . . by the evidences of arsenic in the wall-paper (*sic*). Nevertheless, for the sake of calling attention to this possibility, I allow what I had written to stand unchanged.' A large number of cases of chronic poisoning is cited from various authorities. The patient was of a neuropathic constitution, and had been taking arsenic.

1218. *Mabille on Perforating Ulcer in a Case of General Paralysis.*—In this case the disease was far advanced before the ulcer of the foot was noticed. The patient, a hair-dresser, had presented the usual symptoms of general paralysis; there had been great alcoholic excess, ideas of riches and grandeur, embarrassment of speech, inequality of the pupils, muscular paresis. He had set fire to a house at the instigation of his wife, who was condemned in consequence, while the patient was pronounced irresponsible. When the patient was entirely confined to bed, the ulcer was accidentally discovered on the metatarso-phalangeal joint of the great toe. It was oval, of the size of a florin, and had steep edges. A sero-purulent liquid exuded. It was of considerable depth (1 inch), but the bone was not denuded of periosteum. After death, which occurred in a day or two, no bony or periosteal alterations were found, nor were the vessels of the foot diseased. J. Christian has published two similar cases in the *Annales Médico-Psychologiques*, 1882.

1219. *Bourneville and Pilliet on Two Cases of Double Athetosis with Imbecility.*—In one case the symptoms were present from birth, in the other at the age of six months, after convulsions. Intellectually considered both patients were imbeciles. When seated, movements of the limbs, face, and head were seen, increasing on standing up. Movements of athetosis accompanied the act of walking. Speech, which was difficult, was accompanied by contractions and contortions of the lips. The general sensibility, also the spinal, the notion of position, the direction of movements, and the muscular force were all intact, and the pupils reacted well to light and

accommodation-efforts. Neither patient had vertigo or nystagmus. In the act of prehension the hand described large oscillations before seizing the object, which was then carried to the mouth steadily; thus the first part of the movement was accompanied by choreiform movements. The mode of walking was characteristic. The disease was favourably affected by appropriate treatment, gymnastics, cultivation of the faculties, and by no means followed a progressive course. The diseases most resembling double athetosis are *sclérose en plaques*, locomotor ataxy, hereditary ataxy, and chorea, but they are all plainly differentiated from the above.

E. J. Edwardes, M.D.

1220. *Stewart on a Case of Epileptiform Convulsions following the use of Cocaine as an Urethral Anæsthetic.*—The patient was a man, 32 years of age, who was under treatment for a stricture, three and a half inches from the meatus. Bougies were passed, and no ill effects followed. A week later a drachm and a half of a 4 per cent. solution of cocaine hydrochlorate was injected into the urethra as a preliminary to applying an Otis dilating urethrotome. Dr. Stewart then passed a steel sound, No. 30 F., and after its removal the patient suddenly complained of feeling sick, his limbs became rigid, and consciousness was lost. He recovered somewhat in about a minute, and then fell back, a prey to violent clonic convulsions, beginning in the face and involving the entire body. Throughout there was partial suspension of respiration, and increasing rapidity and weakness of the heart's action. The convulsions lasted some two or three minutes, by which time the patient had become deeply cyanosed. He then gradually recovered consciousness, and was able to leave the surgery in about an hour. He was seen many times subsequently, and his urethra dilated with Otis and steel sounds without causing any unpleasant symptoms. There was an obscure history of epilepsy.

Alfred S. Gubb.

DISEASES OF CHILDREN.

RECENT PAPERS.

1221. Meinert.—On the Influence of the Temperature of the Air upon the Death of Infants from Diarrhœal Diseases. (*Boston Medical and Surgical Journal*, vol. cxix., No. 4.)

1222. Steffen, Jun.—On a Case of Pernicious Anæmia in an Infant. (*Jahrbuch für Kinderheilkunde*, Band 28, Heft 4.)

1223. Forchheimer.—On Non-Surgical Diseases of the Mouth in Children. (*Archives of Pediatrics*, vol. v., Nos. 57 and 58.)

1224. McCall.—On Salol in a Case of Dysentery. (Reprint from *The Medical Brief of St. Louis*, No. xi., 1888.)

1225. Duci.—On Tuberculosis of the Choroid. (*Gazz. Med. Italiana*, May 1888.)

1226. West.—On Pneumonia in Infants. (*Chicago Med. Times*, September 1888.)

Art. 1221. *Meinert on the Influence of the Temperature of the Air upon the Death of Infants from Diarrhœal Diseases.*—The conclusions embodied in this paper are the result of a system of collective investigation initiated by Dr. Meinert in Dresden; 519 papers, referring to as many fatal cases, and each containing thirty questions, were returned to the author. Of this number 444 were cases of acute diarrhœa and 75 chronic. The cases were inscribed on a chart, containing the dates of commencement and termination of the complaint, the mean daily temperature, the barometric pressure, the humidity of the air, the rainfall, the velocity and direction of the wind, and the date of thunderstorms. Of these, the most powerful mitigator is a high wind; for a high degree of temperature combined with a high wind is not dangerous, but moderate temperature without wind produces a considerable increase of sickness and death. The most rapidly fatal cases occurred in the most sultry weather. An examination of the houses in which the fatal cases occurred showed generally that deaths by summer diarrhœa occurred only in those dwellings in which, by the influence of a high atmospheric temperature, a still higher temperature indoors had developed in consequence of insufficient ventilation. Deaths occurred more frequently in dwellings exposed to the sun, and to which winds had scarcely any access. Moreover, the greatest number of deaths occurred in the ground floors and first floors, while in the basements, which are very little exposed to the sun, there was the smallest number of deaths. The temperature of the first-floor apartments, inhabited by the richer classes, was found on the average to show an increase over the external shade temperature of 43° F. Close living with small cubic space per head did not increase the mortality, provided the houses were not shut in, and provided the rooms could be exposed to strong currents of air. One suburb, with a population of 2,921, living chiefly in villas, had only three deaths. In dwellings of equal cubic measurement there were, *ceteris paribus*, most deaths in those with low ceilings. Since the operation of the law putting down baby farming the deaths have been no greater amongst illegitimate than legitimate children. The greater mortality amongst children brought up by the bottle is due, at least in part, to an excess of substantial food. The child is naturally thirstier in the hot weather; but if at the breast does not suffer, because the mother is thirstier too, and by drinking dilutes her milk. The child brought up artificially takes an increased quantity of food, since the degree of concentration is unaltered, the body heat is therefore increased. In conclusion, the lecturer pointed out that the mortality of infants in the summer months constantly decreases towards the south from Berlin to Rome. This is due partly to the custom of suckling being more general, and partly to the houses and the clothing being better adapted for a warm climate.

1222. *Steffen on a Case of Pernicious Anæmia in an Infant.*—The patient was a girl, aged 16 months. She was nourished at the breast for the first three months, and afterwards brought up on milk and farinaceous foods. In common with all the family, she was rather pallid, but otherwise appeared healthy though unnaturally quiet. She was taken to the hospital, in consequence of small white spots in the mouth, on February 15, 1888. Examination showed double rosary, enlarged epiphyses, and an ill-nourished, pallid condition. The whole oral cavity was spotted with aphthæ, and the next day the rectal mucous membrane was found to be in a similar state. Boracic acid had a favourable effect upon the aphthæ, but the blood showed a loss of one-third of its red corpuscles, and those present were remarkably

pale, although not changed in form. The white cells were also scanty, and appeared smaller than usual. The child was now ordered iodide of iron. On March 10, slight œdema of the face was observed, but it disappeared the next day. On the 24th the child was very weak and took very little; the pallor had increased, the red corpuscles somewhat further diminished in number. Temperature, 100°; pulse, 90 to 102, small and soft. Spleen and lymphatic glands apparently unaffected. On April 2 extensive broncho-pneumonia set in, and carried off the child two days later. On *post mortem* examination the lung was found in the condition diagnosed, with the addition of some recent pleural adhesions. The spleen was enlarged, the lymphatic glands succulent, and, distributed throughout almost all organs, were numerous yellowish pigment patches. With the microscope the spleen was found in a condition of cellular hyperplasia; the liver acini contained abundant fat globules, the epithelium lining the tubulæ uriniferæ was the seat of fatty degeneration, and the bones showed rachitic changes. In conclusion, the author refers to the cases published by Quincke, Stephen Mackenzie, Elben, Kyellberg, and Somma.

1223. *Forchheimer on Non-Surgical Diseases of the Mouth in Children.*—The author begins by pointing out that, for the first few months of life, the mouth is very dry from deficiency of saliva. Later, most forms of stomatitis cause salivation, and this saliva, containing, as it does, lower pathogenic forms of life, may easily, when swallowed, produce derangement of the stomach. The connection between a disordered stomach and stomatitis has long been noticed; but, in Dr. Forchheimer's opinion, it is the affection of the mouth which stands in causal relation, and not *vice versâ*, as generally held. Stomatitis may be divided into S. catarrhalis, S. aphthosa, S. ulcerosa S. mycosa, S. gangrenosa, S. crouposa (seu diphtheritica), and S. syphilitica. Catarrhal stomatitis is produced by some form of irritation; it may be mechanical, chemical, or thermal. A low form of life may act either chemically or mechanically. Dentition in a healthy child is insufficient to cause general stomatitis, although the gums may be a little inflamed. The principal causes are lack of cleanliness of the mouth, food in a state of fermentation, food or drink which is too hot, food in excess, persistent vomiting. The causal relation of schizomycetes can hardly be said to be proved, although it is probable. Teats and gum-rubbers, if allowed to roll about the floor, certainly facilitate the introduction of these germs. A low state of nutrition is more often the result than the cause of stomatitis. The first stage is one of simple erythema, so that the whole mouth takes upon itself a more or less deep-red colour, and the hyperæmia may be so great, especially in newly-born infants, as to produce slight hæmorrhages, which, later, give a yellow discoloration most marked over the palate. Later, the secretion is increased, the buccal membrane is puffy, and perhaps pitted by the pressure of the teeth, if any. In older children the gums and lips are swollen, and the surface of the mucous membrane is granular from the swelling of obstructed ducts. The lymphatic glands are enlarged in direct proportion to the severity of the complaint. An infant will take two or three draws at the breast, and then suddenly let go and cry. At other times it may only whine, but the saliva (at least in older infants) constantly dribbles from the mouth, and frequently causes eczema where it touches the skin. The two or three days' abstinence from food may in an ill-nourished child easily prove fatal.

1224. *McCall on Salol in a Case of Dysentery.*—The patient was a delicate boy, aged 5 years. On Aug. 1 he passed a number of bloody stools, which on the whole increased in number during the next four days. On Aug. 6, when the author first saw him, there were pyrexia, tender abdomen, and sallow skin, and the one stool examined contained 3 or 4 ounces of blood and some mucus, but no fæcal matter. Ergot gave relief, but was discontinued as it seemed to cause delirium. The hæmorrhage then returned. Bismuth, together with an occasional calomel and opium powder, answered very well for a day or two; but, as the hæmorrhage returned, 2 grains of salol every three hours were given. Improvement began at once and the child rapidly recovered. The drug was given for ten days, the total quantity being 200 grains, and no disturbance of any kind followed its use.

R. W. Leftwich, M.D.

1225. *Duci on Tuberculosis of the Choroid.*—Dr. E. Duci records two cases of children, aged 10 and 8 years, attacked with tubercular meningitis, in whom tubercles were recognised on the choroid during life. He gives an account of similar cases reported since the first discovery of the condition by De Mussy in 1837, and suggests that the establishment of the presence or absence of tubercular choroiditis in cases of suspected general tuberculosis might be made more use of as a diagnostic sign than it is at present. Walter Pye.

1226. *West on Pneumonia in Infants.*—In the *Chicago Med. Times*, September 1888, p. 398, Dr. West describes the way in which he treats cases of infantile pneumonia. First, a recumbent position and perfect quiet is essential, warm extremities, and mild, unirritating food the next. Poultices he seldom uses, but he sprinkles compound lobelia powder over a cloth, well spread with lard, and applies it over the entire chest; every twelve hours the chest is washed with warm soap and water, and another cloth applied. Next he gives two-thirds of a minim of tincture aconite alternately with the same dose of ipecacuanha, in a teaspoonful of water, every hour. If there be great restlessness he adds one-third of a minim of the fluid extract of hyoscyamus to each dose of ipecacuanha; if a harsh, loose cough, or evidence of bronchial irritation, he adds rather less than one minim of fluid extract of bryonia to each dose of aconite. If there be a tendency to dulness or stupor, two-thirds of a minim of tincture of belladonna are given instead of the bryonia, or the hyoscyamus, according to symptoms. The air of the room should be kept moist with a steam-kettle near to the child's bed. By means of this treatment Dr. West states that he has treated a great number of cases, and has not lost quite 1 per cent. of his patients. Richard Neale, M.D.

OPHTHALMOLOGY.

RECENT PAPERS.

1227. Adamük, Professor E.—On an Abnormal Movement of the Eyelids and Eyes. (*Klin. Monats. für Augenheilk.*, May 1888.)

1228. Grossmann.—On Nitrate of Silver-staining of the Conjunctiva (Argyria). (*Ophthalmic Rev.*, June 1888.)

1229. Bull, Dr. Ole.—Synchronous Movements of the Upper Lid and Maxilla. (*Knapp's Archives*, June 1888.)

1230. Lang, W., and Barrett, J. W.—On Concomitant Convergent Strabismus. (*Ophthalmic Hospital Reports*, vol. xii., Parts 1 and 2.)

1231. Galezowski.—On the Different Varieties of Atrophy of the Optic Nerve in Ataxic Patients (*Des différents Variétés d'Atrophie du Nerf Optique chez les Ataxiques*). (*Gaz. Hebdom. de Méd. et de Chirurg.*, 1888, No. 17.)

1232. Jessop.—On Ocular Headaches. (*Practitioner*, October 1888.)

1233. Steinach, Dr.—Strophanthus Hispidus as an Anæsthetic. (*Rev. Gén. de Clin. et de Thérap.*, Sept. 20, 1888.)

Art. 1227. *Adamiük on an Abnormal Movement of the Eyelids and Eyes.*—In the London Medical Recorder for April of this year we commented on some cases recorded by Mr. Gunn and Professor Helfreich in which a sudden and involuntary movement of the upper lid occurred during mastication, ptosis being present at other times. Adamiük now records an anomaly which is somewhat different, but which may conveniently be considered with these cases. The patient was a nun, aged 40. Under ordinary circumstances the appearance of the eyes was normal, but as soon as she began to eat every extensive movement of the jaw was accompanied by raising and retraction of the upper lids of both eyes, and by increasing ptosis. The latter was so extreme that only the posterior third of the globes appeared to be covered. On the patient ceasing to masticate, the eyes gradually resumed their normal condition. The writer attributes the occurrence of the ptosis to venous stasis resulting from pressure on the pterygoid plexus of veins, which in the normal condition anastomoses freely with the facial vein and with the cavernous sinus.

1228. *Grossmann on Nitrate of Silver-staining of the Conjunctiva.*—Dr. Grossmann had an opportunity of examining an eye which had been deeply stained with nitrate of silver. He found that the seat of the staining was not as generally supposed in the epithelium, but in the elastic fibres, the epithelium being almost free. The pigment grains were found to lie in a granular detritus formed by the breaking up of old elastic fibres.

1229. *Bull on Synchronous Movements of the Upper Lid and Maxilla.*—This is another instance of the curious anomaly of which we quoted examples in the London Medical Recorder for April and August. The patient was a man aged 19. The right upper lid had always drooped, and the sight of that eye was always defective. The patient as long as he could remember was aware that the drooping lid was raised when the mouth was open. The personal and family history was unimportant. The upper lid drooped so that the height of the palpebral fissure was only 3 millimètres. The lid was not raised in looking up, but the upward movement of the globe was defective. When the mouth was opened the lid was so much raised that the greater part of the pupil became visible. When, however, the right eye was covered the left lid was raised in looking up to the same extent as when the mouth was opened, and under these circumstances opening the mouth caused no further raising. In the cases previously recorded, the phenomenon was explained on the assumption of abnormal innervation. Dr. Ole Bull thinks that such a theory is inadmissible in the absence of any anatomical evidence, and considers that it is due to a synchronous movement, the tendency to which is often present, but the synergetic movements are inhibited under ordinary conditions; the existence of the ptosis, however, removes the desire to check the movement. He considers that these synergetic movements are very common, and adduces in support of this belief the fact that children when gaping not unfrequently raise the eyelids. Since the recorded cases are so few, and not exactly similar, we think in would be well to collect more observations before accepting or formulating any theory.

1230. *Lang and Barrett on Concomitant Convergent Strabismus.*—The authors have investigated the subject in the only way which offers any prospect of clearing up the many points which are still disputed—namely, by the collection of a large number of cases observed by themselves. Their observations extend over a period of four years. During that time 350 cases of strabismus came under their notice, but these papers are based only on 102 of these, since in the others either the notes were not sufficiently accurate, or the cases were not observed long enough to give reliable information. Anyone who is practically acquainted with the working of the out-patient department at Moorfields will appreciate the amount of labour involved in the collection of these cases. We shall consider the different points without reference to the order in which they occur in the papers. We will first, however, point out in passing that the description of the method of measuring the angular deviation of the squinting eye is misleading, although, doubtless, the measurements were correctly made. The squinting eye was placed, as usual, in the centre of the perimeter; the patient was then directed to look at a distant object through an aperture, which is described as being placed above the central fixation point; obviously this aperture should be placed at the point on the perimeter at which the visual axis of the fixing eye cuts it when directed straight forwards—namely, at a distance from the central fixation point equal to twice the distance between the middle line of the face and the centre of the cornea of the fixing eye. In making these measurements we nowhere find the difficulty referred to, that the degree of squint is in some cases extremely variable. Nor do we find any distinction made between cases in which the squint is occasional or periodic, and those in which it is constant. Some of the facts stated would rather lead us to conclude that only cases of constant squint were included in the paper, but this is nowhere stated. The following sentence seems to indicate that the authors are rather sceptical as to the effect of atropine in diminishing the amount of strabismus, or, at any rate, to think that its effect has been exaggerated. 'There has apparently existed a belief among ophthalmologists that the instillation of atropine causes diminution in the amount of convergence.' We should ourselves have thought that it would have been difficult to find any fact more conclusively established than this effect of atropine. The authors investigated its effect in 38 cases; the angle remained unaltered in 11, was diminished in 11, and increased in 16 cases. As a mydriatic was used in all the cases observed, it is a pity that this point was not investigated in a larger number of cases. We think that here also the variation in the degree of squint has been overlooked, and the difference made by the time the squint has existed. The writers, however, confirm the opinion generally held that the cases in which the squint diminishes with atropine are those most amenable to treatment

with glasses alone, although the latter treatment was effective in many cases in which atropine failed.

The most practical part of the paper is that which deals with the effect of wearing glasses which fully correct the hypermetropia. The periods for which the glasses were worn varied from 3 months to 5 years, the average being 7½ months. In 85·3 per cent. there was a diminution in the amount of squint. Of these, in 29 per cent. the improvement only persisted as long as the glasses were worn. Cases were considered cured in which the squint did not exceed 5°. This result was obtained in 36·3 per cent. while the glasses were worn, and in 10·8 per cent. a 'permanent' cure was effected; but it is not stated what length of time without the glasses was necessary to establish this, an important omission, since cases occasionally relapse months after the glasses have been laid aside. As regards the establishment of binocular vision this was exceptional, even in the cured cases, but these must have included a large number of cases in which the amblyopia of the squinting eye precluded the possibility of binocular vision. What we want to know is the probability of restoring or producing it when there is no considerable amblyopia. It is said that in some instances there was binocular vision with glasses, but it became monocular when they were removed. This seems difficult to account for unless the removal of the glasses impaired the vision of one eye, or caused a slight relapse of squint. We have seen many instances in which there was binocular vision while the eyes were parallel, but immediate suppression of one image when the slightest squint occurred, or when a vertical prism was used. There seems to be no doubt that those who have squinted acquire a great power of readily suppressing all images whose recognition would cause them annoyance.

The existence of binocular vision is not always easy to ascertain, and we should like to know what test was used; we presume that Snellen's coloured letters were employed, as Hering's test would probably have occupied too much time, but then we want to know whether any means were taken to encourage recognition of both images or not. Many patients will see only one image till their attention is called to the other, when they will see (not merely *say* that they see) both. On the whole we are in the condition of 'wanting to know' a good deal. The difference in the refraction of the two eyes was less than might have been anticipated: in fact, the difference in the degree of hypermetropia was insignificant, but there was a decided preponderance of astigmatism in the squinting eyes.

There are few matters about which there has been greater difference of opinion than the possibility of improving the vision of the squinting eye. Although this question is dealt with rather fully we do not think all the information has been obtained that might have been. A large number of cases are given in which correcting glasses failed to improve the vision when worn for a long time, but if the patient only had monocular vision, and always used the other eye, he might just as well have kept the glass in his pocket as on his face as far as the chances of improving the amblyopia were concerned. It is stated on p. 145 that monocular use of the amblyopic eye, and even the restoration of binocular vision, all fail to improve the vision; but in the paper we find no statement that use of the amblyopic eye was ever practised or enjoined, and as regards amblyopia and binocular vision, we do not know in what sense the authors use either term. On p. 136 it is stated that an eye may have vision of $\frac{6}{9}$ and yet be amblyopic possibly—but, if so, we require a fresh definition of the term.

With reference to the age at which the squint made its appearance, out of 195 cases, the average age at which squint appeared was three to four years; in 36 it occurred during first year, in 34 it occurred after the fifth, and in 3 of these after the tenth year. Of these 34 cases no less than 10 were cases of alternating strabismus, with excellent vision in each eye; 5 were caused by corneal ulcers, &c. Of the remaining 19, the vision in 17 after correction with glasses averaged $\frac{6}{18}$, in 4 being $\frac{6}{9}$ or more. From which it may be adduced that 'good vision in the squinting eye is retained usually in cases of strabismus in which the disease appears later than usual,' and 'that many of the cases which begin late are cases of alternating strabismus, in which excellent vision exists in each eye.' From these facts as premises it is concluded that the amblyopia is due to binocular vision having been rendered impossible before the visual sense has been educated, and it is therefore regarded 'as being due not to a deterioration of vision, but to a failure of development.' As the authors point out, it has never been proved that deterioration of vision ever occurs when once it has been properly acquired. The authors argue that if the amblyopia were the cause of the squint, it would be more often present in other members of the squinter's family, and also that we should find more cases of amblyopia in non-squinters. But the frequency of such is still a disputed point. As regards the transmission of squint or the tendency to squint, from parent to child, we do not think that the authors' facts show that it is more transmissible than other peculiarities; but, as they promise a further communication on the same subject, we will defer any further comment till this appears.

W. Adams Frost.

1231. *Galezowski on two kinds of Nerve Atrophy in Ataxic Subjects.*—According to Galezowski there are two distinct kinds of atrophy of the optic nerve. In one the nerve fibrils are the first to atrophy, the other kind affects primarily the vessels of the optic nerve either as endo- or periarteritis; this latter kind is the less frequent than the other. The advance of the atrophy may sometimes be checked by appropriate treatment—viz., by antipyrin and aurum cyanide. The author effected this in eight cases. According to his observations, two-thirds of all cases of optic nerve atrophy are due to tabes dorsalis, and of these, again, two-thirds are due to syphilis. Such atrophies usually lead to total blindness; but the vascular kind is more amenable to treatment than the other.

E. J. Edwardes, M.D.

1232. *Jessop on Ocular Headaches.*—In the *Practitioner*, October 1888, p. 274, Mr. Jessop contributes a paper on headache dependent on ocular errors, and especially those which are due to refractive or deficient accommodation. The position of the pain in these cases is varied, but is generally in the territory of the fifth pair of nerves, as might be expected, from the fact that the intra- and extra-ocular muscles receive their sensory nerve supply from this source. The most frequent seat is along the ophthalmic or first division of the fifth, giving rise to frontal headache. Temporal and vertical headaches are the next most common, and occipital headache the least frequent. Besides headache, the

different neuralgias along the branches of the fifth nerve are associated with refraction errors—namely, supra-orbital, supra-trochlear, nasal, lachrymal, and rarely infra-orbital. The neuralgia may be one-sided or bilateral. The ocular headache, as a rule, is most noticed when the patient is out of health or over-tired; and many do not recognise the cause of their headaches when they find a change does them good, forgetting that they are giving rest to the eyes, and thus removing the cause of their trouble. In these cases, also, a tonic often improves the condition of the ciliary muscle, and strengthens the convergent power of the eyes; so it is better to test the error of refraction after a course of tonic treatment. The condition most commonly associated with headaches is hyperopia, especially in children. The next most common cause is astigmatism, comprising all the different kinds of simple, compound, and mixed. Myopia is a much rarer cause. The extrinsic ocular muscular system is often defective, generally in combination with an error of refraction, &c., but sometimes it is alone at fault. The most common error is insufficiency of convergent power, due to weakness of the adductors, generally binocular and equal, but sometimes more marked in one eye. The author then goes into the usual methods of procedure for diagnosing the immediate exciting cause of the headache; but special instruments are required for this, and it is best to take the patient to a good oculist and put the eyes under atropine, so that a thorough examination can be made, instead of trying to give ordinary glasses without atropising the eyes. [In the *Medical Digest and Appendix*, sections 1815 : 2, a large number of valuable observations upon ophthalmic migraine may be consulted.—*Rep.*] RICHARD NEALE, M.D.

1233. *Steinach on Strophanthus Hispidus as an Anæsthetic.*—The author has discovered that a few drops of a 10 per cent. aqueous solution of the ethereal, alcoholic or aqueous extract of strophanthus, introduced into the eye, give rise, in about twenty-five minutes, to anæsthesia of the cornea and conjunctiva, which lasts from three to five hours. The anæsthesia takes longer to develop than with cocaine, but lasts much longer. Moreover, there is a difference between the action of the two drugs, seeing that strophanthus is accompanied by dilatation of the blood-vessels, while cocaine produces local anæmia. He was unable to isolate the anæsthetic principle, but he asserts that it is not strophanthin, a solution of the alkaloid, far from causing a diminution of sensation, provoking pain. He suggests, therefore, that it may be due either to the *ineine* or to the strophanthidine. ALFRED S. GUBB.

REVIEWS.

ARTICLE 1234.

The Diagnosis and Treatment of Diseases of the Kidney Amenable to Direct Surgical Interference. By W. BRUCE CLARKE, M.A., M.B., F.R.C.S. London: H. K. Lewis. 1886.

IT was probably unfortunate for the author that Mr. Henry Morris's work on 'Surgical Diseases of the Kidney' appeared just before he had completed this essay, for there is much in it that shows careful research, and the cases from the surgical practice of St. Bartholomew's Hospital are a great addition to the literature of the subject. In the same way, the illustrations from the *post mortem* room and museum of that hospital are original and valuable. As it now stands, the book consists mainly of the Jacksonian Prize Essay of the Royal College of Surgeons of 1886, with a few additions made to it after the appearance of Mr. Morris's work, and during the passage through the press.

The style in which it is written is clear and practical, and the references are very thorough. The experience of the present day is considerably enlarged since this essay was written, but this work will always stand as a sound work of reference and an evidence of the author's careful balancing of facts and opinions.

There is one point on which we should have expected more consideration in the present day, and that is the importance of embryology and development in tracing some of the defects of the kidney in abnormality and even in pathology. There is no doubt that a knowledge of these matters is of the utmost importance to the surgeon and pathologist. We notice, too, that the causes given for hydronephrosis are considered to be mainly the occurrence of calculi in the ureter. This does not accord with the experience of Mr. Morris or the recent views of Dr. Newman. Omitting those cases in which the ureter is pressed upon by band or growth, or in which the affection is congenital, he says that by far the great majority of cases are due to the presence of calculus in the ureter, and that 'a few are the result of stricture of the ureter.' The obstruction, he allows, may be in the urethra, but no cases are given of this, and its importance is not noticed. Sir Henry Thompson mentions dilatation of the kidney as one of the results of stricture, but the proportion of such cases is not stated.

Mr. Bruce Clarke is to be congratulated upon his work and its success, and we must not forget that it appeared at a time when the subject had not received so much attention as it has now attracted.

W. W. WAGSTAFFE.

ARTICLE 1235.

Clinical Lectures on Diseases of the Urinary Organs. By Sir HENRY THOMPSON, F.R.C.S. Eighth edition. London: J. & A. Churchill. 1888.

THE fact of this work having reached the eighth edition is the best evidence of its popularity, and the author's reputation is guarantee of the soundness of its teaching. As a writer there are few surgeons who give so pleasant occupation to the reader as Sir Henry Thompson, and it is certain that any advances in the subject he is engaged upon will be carefully noted and considered without prejudice.

It appears that six lectures have been added in this edition, so that there are now thirty-two, and all the older ones have been carefully revised, and considerable additions made to them. We therefore find careful and thorough considerations given to the suprapubic operation for stone in the bladder, to the results of digital exploration of the bladder by the perineal operation, and to the most recent modes of affording relief by operation in cases of advanced prostatic disease. Moreover, we find an admirable and well-known exposition of the author's views on operative treatment for tumours of the bladder. And, finally, a *résumé* of his entire experience of operations for calculus made

up to the end of the year 1886, embracing about 900 cases.

These lectures, therefore, still deal with certain of the urinary organs, and do not include any full consideration of the kidney and ureter, though these are referred to incidentally in their being sometimes involved in pathological consequences from diseases of the bladder and urethra.

The last lecture is a very practical and useful one on the examination of the urine for clinical purposes, and contains good diagrams of the appearances of various deposits which are found in different states of disease. Another lecture is on digital exploration of the bladder, and we are not surprised to find that he greatly prefers this method to any endoscopic illumination by the most recent instruments.

The lectures are certainly a mine of information upon the subjects treated of, and they are expressed in the forcible and attractive language which we are accustomed to from the author. The illustrations are numerous and good, and the whole forms a handsome volume, which the surgeon will find a valuable addition to his library, which should contain Mr. Reginald Harrison's lectures on the same important subject. W. W. Wagstaffe.

Article 1236.

Lectures to Practitioners on the Diseases of the Kidney Amenable to Surgical Treatment. By David Newman, M.D. London: Longmans, Green, & Co.

These lectures were delivered in Glasgow in the autumn of 1886, as a post-graduate course, and have been delayed in publication partly by the author's wish to complete some tables which were wanted to show the causes of acquired hydronephrosis, and which entailed a search through 665 cases distributed in published records, in hospital reports, and in museums. The volume now presented is a rather large one, of over 450 pages, and is practically a monograph upon the subject. There is no doubt that post-graduate courses will lead to a large increase in medical publications, upon the principle that the care bestowed by the lecturer upon the preparation of his subject will make him unwilling to lose the opportunity of seeing it in a permanent form.

There have been published within the last few years some excellent manuals upon surgical diseases of the kidney, and we confess to being unable to find any advance upon these in the work under notice; nor do we find the lectures, excellent as they may have been at the time, more attractive to the readers than, or so useful for reference as, those we already possess. Moreover, we cannot help noticing that the standard and admirable work of Mr. Henry Morris receives little or no notice by the author, and inasmuch as Mr. Henry Morris's work was published in 1885, and these lectures delivered in 1887, it seems hardly likely that it was not made some use of. As a work of sound usefulness and of easy reference, Mr. Morris has not been surpassed, and it will still be found of the greatest value to practitioners.

There is, however, much that is of interest to the practitioner in these lectures, and we cordially endorse his opening remarks upon the importance of not relegating all diseases of the kidney to the domain of the physician. The majority of patients admitted into hospital suffering from any disease of the kidney are placed under the care of the physician rather than of the surgeon, notwithstanding that in many instances medical treatment is useless, and the only chance of cure consists in early surgical interference. The classification of diseases of the kidney into surgical and medical must be admitted to be a very arbitrary one, and the placing of a case into one or other division must largely depend upon the individual opinion of the professional attendant, and whether or not the patient is willing to submit to surgical treatment. Without invading the sphere of the physician, the surgeon is rapidly coming to his assistance and widening his own field of operations. But while this is so the surgeon must depend upon the physician or upon the general practitioner to recognise the cases likely to be benefited by surgical interference.

There is great truth in these remarks, and there is no doubt they apply with even greater force to our great metropolis, where the distinctions between surgeon, physician, and general practitioner are more marked than elsewhere; but the physician or practitioner of the present day must know when surgery can help him in his treatment, and the surgeon must more than ever be a good physician if he would do justice to himself or his patient. The consideration, therefore, of a border-line subject such as this is peculiarly appropriate for a course of post-graduate lectures.

In the table showing the causes of acquired hydronephrosis in 665 cases, about a third (234) were due to stricture of the urethra, enlargement of the prostate, and hypertrophy and cicatrices of the bladder. Other tables given before do not point so strongly to these important causes, and Dr. Newman's inquiries are therefore very valuable. In another subject, which has recently engaged attention, that of determining from which ureter hæmorrhage or pus is being discharged, he shows that in the female bladder this was possible to him by means of a speculum to which he had attached an electric lamp, but the recent advances made by Nitze and Mr. Hurry Fenwick have not received a foot-note, as might have been expected in a work so lately published. There are tables given of nephrotomies and nephrectomies which will prove useful.

The book is a handsome one, and will doubtless be welcomed by those who had the opportunity of attending the lectures, and will be referred to by others who are carefully studying this very important subject. W. W. Wagstaffe.

Article 1237.

A Correlation Theory of Chemical Action and Affinity. By Thomas Wright Hall, M.D. London: Remington & Co.

In this very extraordinary work most modern scientific theories are rejected. Indeed, to such an extent is the phraseology and ordinary method of the day departed from, that it is often difficult even to get an inkling of an idea of what is passing through the author's mind. Some experiments of contemporary scientific workers are quoted, but there is no mention of any performed by the author himself.

Perhaps a few quotations will best convey some notion of the wild speculations with which the book abounds. Thus in Chap. I., p. 3, we find the following:—

'In philosophising on chemistry, therefore, we

despair of the atomic theory in chemistry, for we abandon the atom as the central force and thought of chemistry ; and we forsake the laboratory of art as the centre spot in chemistry.'

P. 97 :—'In the same dayshine and nightshine and climate, in the same spot of the same field, grow together the red poppy and the yellow wheat, the bane and the staff of life—for you will say that the one is the opium-yielding poppy and the other is the bread-yielding wheat, and that the wheat and the poppy differ in character.'

The author here forces upon his reader the view that the harmless red poppy of our cornfields yields opium. But he continues :—

'In the same dayshine and nightshine, in the same climate and laboratory spot, likewise together grow (*sic*) the persolid carbon, the liquid water, and the parboiled air, just because each has a special character that makes them appropriate from Nature's impartial forces the special force and form of each.'

Again, on p. 176 :—'Nitrogen makes no chemical stir amid the comparatively lazy minerals, for it has chosen organic chemistry, the better part—the life part—that cannot be taken from nitrogen. And nitrogen, freely, laughably vituperated by man, and styled azote, Stickstoff, oxygen diluter, and what not, is solemnly crowned in chemistry the king of life, since nitrogen is the highest positive chemical in all the breathing lives of earth.'

On p. 209 we have a curious explanation of the contraction in volume observed during the combination of many gases.

'And although water or steam is made out of two volumes of hydrogen to one of oxygen, still steam, when actually formed, is not composed of three volumes of its ingredients, but of two. The three volumes become two volumes, because, in the combination of hydrogen and oxygen there is a balanced or harmonious equality of pulsation and forms between them. The odd volumes in combining gases are, as a rule, made evens in combination, because the combiners in evens pulsate in unison or unishine, or in the most perfect, and therefore most preferable, harmony of form and colour pulsation.'

On p. 266 we have a good instance of the author's powers of criticism. He is speaking of a theory of combustion :—'This Theory says that in their combustion we have the atoms of oxygen and hydrogen separated ; but Fact says that for all chemical actions, combustions inclusive, atoms are in the *very least* degree separated, or are very near each other ; and the nearer the better. This Theory says that these atoms of hydrogen and oxygen are like lifted weights ; but Fact says that these atoms are as unlike weights as it is possible to be, the atoms being the smallest conceivable particles of the lightest of all known bodies. This Theory says that these atoms of hydrogen and oxygen clash together, and produce by their clashing the most enormous combustion heat known to us.'

By a quibble, the fact that every atom possesses a definite weight is thrown into the background ; and in a similar way the enormous number of atoms which by their clashing produce the most enormous heat, &c., is left out of consideration.

The author appears to be a musician, for there is a manifest endeavour throughout his book to compare the harmony of the Universe with musical harmonious vibrations. Thus, on the last page, p. 360, we read—'Oscillatory motions in ether . . . . exchanged between sidereal and planetary matters and their analogues . . . . motions between actives and reactives, which are best typified in those motions between airs and tuned matters, called music on earth.' G. Stillingfleet Johnson.

Article 1238.

A Handbook of Therapeutics. By Sidney Ringer, M.D., F.R.S. Twelfth Edition. London : H. K. Lewis, 136 Gower Street, W.C.

The tendency to unweildy increase of size which successive editions of popular text-books often manifest is, happily, obviated in this, the twelfth edition of Professor Ringer's well-known *Handbook of Therapeutics* ; for by judicious compression and some slight alteration of the type the present volume is nearly a hundred pages less than some of the preceding editions.

The author, in his brief preface to the present edition, claims for his book that it is 'a work on clinical therapeutics,' for his method has been to 'dwell much more on the indications for the use of drugs in disease than on their physiological action.' It is this tendency on the part of the author which has made his work so widely popular as a book of reference to the actual practitioner.

This new edition bears marks of careful revision and rearrangement in parts, and contains full information as to the uses of new remedies. We shall refer to the author's account of some of these. Of *Duboisia*, introduced by Mr. John Tweedy, and said to be identical with pure hyoscine, and recommended in the treatment of exophthalmic goître, the author simply enumerates the physiological properties. *Hyoscin* is recommended as 'the best remedy to calm the delirium of mental affections.' In *Grindelia robusta*, strongly advocated by some as a remedy for asthma, Dr. Ringer 'has been greatly disappointed . . . it has failed to realise the expectations raised by the recommendations of various writers.' *Strophanthus*, he believes, 'is now generally held to be inferior to digitalis. It is certain that it is not nearly so much employed as it was.' He admits, however, 'that cases occur in which it succeeds where digitalis has failed.' This is also our own experience. Of *Sparteine* as a cardiac tonic the author speaks with some reserve, and he does not even mention its proposed use as a remedy for the morphine habit. Other proposed substitutes for digitalis, as *Convallaria majalis* and *Adonidin*, have evidently not impressed Prof. Ringer with their superiority or even equivalence to digitalis. Of *Urethan* as a hypnotic he observes that it has 'already fallen into disuse,' and of *Paraldehyde* that its nauseous taste is a great drawback to its general use for procuring sleep, but it is valuable for this purpose and does not depress the cardiac action, and is especially indicated in cases where chloral disagrees. *Sulphonal*, the most recently introduced soporific, is not mentioned ; indeed, the most popular and industrious author on therapeutics must find it difficult nowadays to keep pace with the rapid introduction of new remedies, especially of new hypnotics and antipyretics.

Of the much over-praised and, at present, over-popular *Cascara Sagrada*, he observes :—'I have not yet met a case of habitual constipation cured solely by the use of this drug.'

Salol, he maintains, acts simply as salicylic acid, and shares in all the 'good and evil' qualities of sodium salicylate, save that its taste is more agreeable, and that it does not give rise to sickness. As an anti-

pyretic he observes :—'In my hands, like all other antipyretics yet introduced, salol has done more harm than good.' After this expression of opinion one naturally turns to the article on *Antipyrine*, to gather the ripe experience of our author on the present mania for blindly administering drugs, simply because they are found to reduce temperature. 'After many trials,' says Dr. Ringer, 'I must confess I find that, like other antipyretics, it causes so much distress and depression that in many cases it does more harm than good, though I think it less depressing than other antipyretics.'

We are disposed to share the author's doubt as to the real value of these recently introduced depressors of temperature ; and we believe they are far too generally given, and without sufficient evidence that they exert any favourable influence on the course and issue of febrile affections.

A condensed summary of the physiological effects of kairin, thallin, and hydrochinon, from the article by Dr. Beyer in the American *Journal of the American Sciences*, is added to the article on antipyrine.

Dr. Ringer admits the value of antipyrine as a remedy for migraine and some forms of neuralgia, but maintains that it is an error to say that it is as useful as sodium salicylate in acute rheumatism—'In this disease antipyrine cannot compare with salicylate of soda.'

Of phenacetin, the last, if it is safe to say so, of the antipyretics, his experience is, at present, 'not favourable.'

Our author plainly gives judgment against the modern craze for 'antipyretics.'

J. Burney Yeo, M.D.

Article 1239.

Alpine Winter in its Medical Aspects. By A. Tucker Wise. Fourth edition. London : J. & A. Churchill. 1888.

Public opinion, proverbially fickle in all things, is still wavering with respect to the value of the Swiss altitudes in the treatment of phthisis, and the reason for this state of uncertainty is not far to seek. Cases of phthisis are sent to the altitudes by advisers who have not duly qualified themselves to give such advice, and the evil results that ensue are attributed to the climate instead of the ill-informed employer of it. Dr. Tucker Wise has from time to time supplied information on the subject, founded on personal experience, which, if it had been consistently followed, would have prevented many such disappointments, and in the present work he has brought together into compact form the principal papers in which his observations and conclusions have been published. Beginning with a general review of the medical aspects of the Alpine winter climate, he passes to a detailed description of the principal health-resorts. Of Davoz Platz he reports a great improvement in sanitary arrangements, and a general desire on the part of the sanitary authorities to keep pace with the increase of inhabitants and their requirements. Wiesen, St. Moritz, Samaden, Pontresina, and other minor health-resorts are each in turn described, and their special features noted.

The influence of the water supply, nature of soil, and variations of the atmosphere are discussed at some length. The necessary association of moisture with any atmosphere of equable character is pointed out, and careful distinction made between the moisture due to a moist soil and that derived from other sources. The former only has been shown to stand in any definite relation to the spread of phthisis. The influence of reduced barometric pressure, of cold and of sunshine, are each in turn reviewed, and a proper influence apportioned to the exhilarating effects of the latter, in maintaining good spirits and a general sensation of *bien être*. A useful chapter follows on the drawbacks which are more or less inseparable from Alpine winter residence, to which we would call the attention of all readers who contemplate a trial of it. In some respects Dr. Wise's opinion differs materially from that generally accepted of late, and, amongst other points, it may be noted that he sees no disadvantage in sending phthisical persons to the altitudes after the winter has begun, laying less stress than is usual on the advantages of acclimatisation. Information as to appropriate clothing, dietary, and mode of life generally in the mountains is given in detail, and deserves very careful attention, both by medical and lay readers. Of the advantages of the Maloja as a winter residence the author is able to speak with the confidence born of long experience, and his account of the district and of the arrangements of the new Kursaal are very complete. Of the very elaborate system of ventilation adopted in the latter he reports favourably, but the methods of supply and extraction of air would hardly commend themselves for use in a large town building, where dust and other impurities could gain access to the endless array of pipes through which all the air, whether warmed or cold, has of necessity to pass.

The part of the work which is perhaps of the greatest value to the medical reader is that which treats of the class of cases most suited for winter residence at the altitudes. Dr. Wise places his views upon this subject in a concise form, but with unmistakable clearness, and he appends a long series of cases in illustration of the effects actually produced under his own observation.

In any further series it would be interesting to learn whether the most successful cases are limited to those patients who have no definite personal or inherited tendency to tubercular disease. This point in the etiology of his cases is not mentioned. The work is concluded by a long series of meteorological observations in past years, and other useful information on the means of access, &c., to the Alpine health-resorts.

The book is illustrated with a few sketches of the principal places dealt with, but might be rendered still more attractive by the substitution of a few local maps, in the place of the large general map of Europe, in which only one of the health-resorts is even marked ! The book may be cordially commended as a useful and complete medical guide to the therapeutic employment of the Alpine winter climate.

E. Clifford Beale, M.B.

Article 1240.

Fever. A Clinical Study by T. J. Maclagan, M.D. London : J. & A. Churchill. 1888.

When considering the nature of fever from a purely physiological standpoint Dr. Macalister advocated an exclusively neurotic theory, believing that all forms of fever are the result of some action on the nervous system. Dr. Maclagan discusses the question clinically, and propounds two theories—a neurotic, which he applies to those forms of fever in which the raised temperature is directly due to disturbance of the nervous centres, causing impairment of inhibition of the thermogenic process ; and

a metabolic, according to which the pyrexia is the result of increased tissue-waste, and primarily due to increased activity of the thermogenic process.

As examples of the neurotic form of pyrexia the author cites those cases in which rise of temperature succeeds lesions of the nervous system of non-inflammatory origin, such as cerebral hæmorrhage and injury to the cervical cord. He regards the result of these lesions as paralytic in nature, the height of the temperature varying according to the extent of the injury, being most pronounced when the connection between the heat-regulating centre and the heat-forming parts of the body is most completely severed. Hyperpyrexia being more commonly met with in these cases, the author believes that phenomenon to be due to 'paralysis of inhibition of metabolism,' whereas ordinary pyrexia may result 'either from defective inhibition or direct stimulation of heat production.' In the hyperpyrexia of acute rheumatism and heat apoplexy the paralysis of heat inhibition is supposed to be brought about by over-stimulation of the inhibitory centre from accumulation of heat within the system.

As typical examples of the metabolic theory, Dr. Maclagan takes the specific infectious fevers. He thinks that if the high temperature in these maladies were the direct result of the action of the poison on the heat-inhibiting function, it would go on rising with the development of the poison instead of reaching its highest point early in the course of the disease when the poison is comparatively small in amount, and if we apply this theory to clinical facts we find that high temperatures are not unfrequently found in mild cases, and conversely, that the so-called malignant cases of epidemic disease are frequently characterised by low temperatures. The anthor assumes that the phenomena which accompany the febrile state result from the propagation in the system of an organism which acts primarily on the blood, and which appropriates the nitrogen and water of the 'constructive store albumen,' the material necessary for its nutrition, at the moment when it is about to be taken up by the tissues, thus giving rise to thirst, with diminished elimination of water from the system, dry skin, and waste of the nitrogenous tissues, such waste varying directly as the amount of the contagium.

Dr. Maclagan diverges from the generally accepted view in attributing the nervous symptoms seen in severe cases to defective nutrition of the nerve centres as the result of the excessive propagation of the poison, and the typhoid symptoms to the same cause together with the retention in the blood of excretory products. The contagium is, according to Dr. Maclagan, harmless in itself, but finds the second factor necessary for its development in the local lesion characteristic of the fever to which it gives rise, and the fixed duration of the attack, the severity or mildness of the general symptoms, the different degrees of individual susceptibility, are said to depend upon the amount of this second factor in the system.

In the most severe cases, when the eruption is ill developed or absent, and death takes place early, Dr. Maclagan believes that the second factor may be concentrated in some locality, such as the bowels, and in support of his argument alludes to those cases of scarlet fever in which diarrhœa is a troublesome symptom. But severe diarrhœa does not often occur as a complication of scarlet fever, and, moreover, in hæmorrhagic small-pox, where there is sometimes no eruption, diarrhœa is equally rare. Indeed, it would appear that in such cases death takes place before the contagium has had time to develop to any extent.

In considering the changes noted after death, the author gives satisfactory explanations of the cause of diminution in bulk of the cerebral substance, and of the difference in the changes which take place in the heart and voluntary muscles.

The metabolic theory is applied in explanation of the peculiarities which distinguish relapsing fever from other specific febrile disorders, and finally, the author discusses the treatment of fever, and the use and action of antipyretics.

The views advocated in this book are evidently the result of a very careful study of the subject of the febrile process. The author considers the question more fully and completely than do some observers who have confined themselves, perhaps too exclusively, to an explanation of the cause of the increased body heat, treating the symptoms which usually accompany it as of comparatively subsidiary importance, and although the hypotheses advanced by him are unverified, there can be no question that they are capable of wide application to clinical facts, and afford opportunities for future investigation.

Article 1241.

Illustrated Lectures on Ambulance Work. By Lawton Roberts, M.D. London : H. K. Lewis, Gower Street.

It is with pleasure that we welcome a third edition of Dr. Roberts' excellent manual. When two large editions of a book have been quickly exhausted, it affords good evidence of merit, and so it does in this case ; the third edition now before us contains fifteen fresh illustrations, and an Appendix dealing with such additional information as is rendered necessary by the recent developments of ambulance work. In this Appendix is contained specially valuable information as to the rescue and treatment of those suffering from suffocation due to poisonous gases in mines, wells, or rooms ; also hints as to carrying insensible persons and prevention of suffocation in burning houses, and to these instructions are added Captain Shaw's rules to firemen how to place persons in the fire escape.

The following suggestion made by Dr. Roberts in the Appendix meets with our special approval : 'To reap the full benefit of ambulance knowledge, as well as to sustain such knowledge when once acquired, it is found an excellent plan to group men who possess "ambulance certificates" together into organised bodies or corps—this more especially in towns, and in connection with collieries, factories, large railway stations, and other centres of labour.' These corps are regularly officered, meet together for practice, &c., and have appliances placed in certain well-known localities ready for use as occasion arises. In Leicester three such ambulance corps are already formed. By means like these the acquirement of ambulance knowledge becomes of real practical use to the community, and not a mere passing amusement.

At the present time there seems to be a revival of interest in 'ambulance work,' and this new edition of Dr. Roberts' book will come as a welcome help to those attending lectures on the subject ; the five chapters deal respectively with the structure of the body, with hæmorrhage, with fractures, with sudden attacks of illness, and with lifting and carrying the

sick. Temporary remedies for each emergency are recommended, and the application of the triangular bandage fully described; the whole book is profusely illustrated, so that information is gained at a glance, which might take pages of print to render equally intelligible.

There is no reference made to the application of the *roller* bandage, which we think an omission to be regretted; and it is the only omission in a volume which gives clear, concise information on other points; in some future edition, perhaps, Dr. Roberts will supply this want.

Owen Lankester.

Article 1242.

La Mort par la Décapitation. Par le Dr. Paul Loye. Paris: Bureaux du *Progrès Médical.* 1888.

The object of this work is in no sense to discuss the advisability or morality of capital punishment, but, accepting existing conditions, to study decapitation as a special method of carrying out the extreme penalty of the law. By experiment and by investigation of the literature of the subject, the author endeavours to solve the question as to whether decapitation is more or less painful than other modes of death, and whether the decapitated head retains consciousness for any length of time. In approaching the question of the exact mechanism of death, we are met with the difficulty that in the cases of dogs and men different conditions obtain. In the former, after decapitation for more than two minutes the head and body exhibit convulsive movements, whilst in the latter both remain in the great majority of cases absolutely without movement. In section of the neck the two most deadly factors are hæmorrhage with asphyxia and violent irritation of the nervous centres. Bearing this in mind, it may be concluded that in the dog death occurs chiefly from asphyxia, and exhibits the convulsive movements of that form. In man, on the other hand, the violence of the shock inhibits the nervous influences, thus producing immediate abolition of reflex and other movements. Dr. Loye, however, found that by causing the knife of his guillotine to pass just below the cranium, so as to divide the medulla, the dog remained perfectly motionless after decapitation. To produce, then, the same effects by decapitation in the dog and in man, it is necessary to strike the former at a very limited area of the medulla, whilst in the latter any part of the cervical cord will suffice.

These results may possibly modify our present views as to the *nœud vital.* This very limited region, division of which, in the dog, produces a sudden and calm death with instantaneous cessation of the respiratory movements, does not appear to have its equivalent in man. In the latter, in fact, the region whose section produces similar effects, so far from being limited, extends at least over the whole of the cervical cord.

Turning to the medico-legal aspect of the case, Dr. Loye is of opinion that all the evidence indisputably proves that conscious life is destroyed instantaneously, such slight facial movements as occur occasionally at a short period after decapitation being only due to a temporary restoration of reflex action.

Destruction of the *ego*, intellectual death, death, in fact, as the law understands the term, occurs at the instant on which the axe falls. 'Moralists and philanthropists,' the author proceeds, 'may be reassured; the punishment of decapitation is not a painful one. It is the method which best realises the intentions of the law of 1791, which provides that the punishment of death shall consist of the deprivation of life without other torments. The form of punishment which meets this indication must ensure two things: firstly, that intellectual death, loss of consciousness, shall be immediate; secondly, that it shall be definitive.' After considering other methods of capital punishment, the author comes to the conclusion that in the guillotine we have, all things considered, by far the most satisfactory method of execution possible.

Bertram C. A. Windle, M.A., M.D.

Article 1243.

A Manual of Ophthalmic Practice. By Charles Higgens. London: H. K. Lewis. 1888.

It is only possible to concentrate the more important points of a large subject into the compass of a book such as this by giving the most careful attention to the arrangement, so that all unnecessary repetition is avoided. From the various plans which might have been adopted, the author appears to have selected the one which presented the greatest inconvenience. The book is divided into two parts: the first contains a description of affections which are not supposed to require operations; the second part is entitled 'Operations,' and to it is relegated the consideration of all affections which generally require operative treatment. To give only a single example of the effect of this arrangement—hordeola and meibomian tumours, affections between which the student has sometimes a difficulty in distinguishing, are treated of in different parts of the book. The author seems to have a special aptitude for scattering the information that he wishes to impart. On p. 29 we have a full description of Liebreich's ophthalmoscope. The 'latest modification' is described (a modification which we were acquainted with ten years ago, and it was not new then), and the instrument is described as a 'useful form.' It is to be hoped that no ardent student will purchase an ophthalmoscope at this stage; for, on reaching p. 62, he will learn from the author himself that there are other instruments so superior to Liebreich's that one of them is almost essential for the estimation of errors of refraction. Even here, however, the instrument that is shown in the illustration is not that which is recommended. On p. 43 we find the statement that the numbers over Jaeger's reading types indicate the distance in feet at which they should be read. To illustrate how erroneous this is, it is only necessary to point out that the type in which this review is printed corresponds to No. 7 Jaeger. If Mr. Higgens can read it at 7 feet, the pleasure he will derive from the accomplishment will go far to neutralise any other feeling that it might tend to produce.

In speaking of the connection between squint and amblyopia of the squinting eye, the author adheres to the old theory that the amblyopia is caused by the squint. We think it would have been only fair to have stated that this theory is by no means universally accepted. The operation of evisceration is described and approved of, but neither the modification suggested by Mr. Mules of introducing a hollow sphere into the scleral cavity, nor that of placing it in Tenon's capsule, is even mentioned. The author may not approve of these operations, but they are becoming exceedingly common, and should certainly have been men-

tioned. In children, abscission is recommended—an operation which, we must confess, we thought had been entirely abandoned. Although of necessity short, we think the final chapter describing affections of the orbit and intra-ocular tumours, is far the best. The author takes a more gloomy view of the prognosis of glioma than we should be disposed to endorse. We are inclined to believe that if enucleation be performed before perforation has taken place there is frequently no recurrence.

We are sorry not to be able to say more in favour of this little book; but, considering Mr. Higgens's well-known ability and large experience both as surgeon and teacher, we think it is hardly worthy of him. W. Adams Frost.

NOTES ON BOOKS.

Article 1244.

The A.B.C. Medical Diary and Visiting List (published by Burroughs, Wellcome, & Co., of Snow Hill Buildings, E.C.), with which is incorporated the *A.B.C. Materia Medica* (published by Whiting & Co., Sardinia Street), contains, in addition to the usual space for the visiting list proper, a large number of tables, statistical and general information, &c., for reference, and a sort of supplementary pharmacopœia, arranged alphabetically, giving useful details of the physical properties and therapeutical applications of various remedies of recent introduction, or for which new uses have been discovered. It is printed on well-sized paper, so that the ink does not show through, and, notwithstanding the vast amount of information and liberal spacing, does not exceed the orthodox size and bulk. The price, complete, bound in leather, is 4*s*.

Article 1245.

Estudio Clinico de los Tumores de la Vejiga. By Dr. Alejandro Settier. Published by the *Administracion de la Revista de Medicina y Cirugia Prácticas.* Madrid: 1888.

In this pamphlet of thirty-nine pages, dedicated to Sir H. Thompson, the distinguished Spanish specialist (Dr. A. Settier) gives a brief summary of our present knowledge of the history, etiology, diagnosis, and treatment of vesical tumours. In diagnosis, he says, the specialists of Vienna—at whose head are Dittel, Ulzmann, and Billroth—lay more stress on the facts obtained by instrumental exploration than on purely clinical symptoms. English specialists, following the example of Sir H. Thompson, prefer to form their opinion after the operation of digital exploration. French surgeons, following Professor Guyon, trust most to clinical data, only having recourse to instrumental exploration in very doubtful cases. He dwells much on the value of microscopical examination of the urine, and insists on the importance of early diagnosis so that operation may stand a good chance of success. For the surgical removal of vesical tumours he describes first Sir H. Thompson's digital exploration by perineal 'button-hole' incision. This, he thinks, most useful in the young. Generally, however, tumours of the bladder occur in adult life, when the prostate is very probably hypertrophied; and then, especially in fat patients, digital exploration—however long and thin one's finger—would be difficult or impossible.

He then describes Professor Guyon's operation of suprapubic cystotomy, and quotes the experiments of Fischer, Kassay, and Blayer on partial resection of the bladder, repeated by the Italians Pacinotti and Poggi, showing its feasibility, and others by Gluck and Zeller on total resection of the bladder repeated and confirmed by Professor Novaro. Dr. Pacinotti insists on the advantage of using horse-hair sutures for the bladder instead of catgut, which is absorbed too quickly. He concludes by insisting on early operation as giving the patient the best chance, and quotes with approval the dictum of Professor Verneuil, 'When a patient suffers from vesical tumour, open his bladder. If, in the course of the operation, you find a tumour capable of extirpation, extirpate it; if not, be content with a simple cystotomy.' Dr. Settier does not give or refer to any cases of his own.

G. D'Arcy Adams, M.D.

Article 1246.

New Sydenham Society. Atlas of Pathology. Fasciculus VI. Hydatid Disease of the Liver. Urinary Calculi with Descriptive Letterpress. By Jonathan Hutchinson, F.R.S. London. 1888.

This fasciculus contains one plate illustrative of hydatids of the liver, and four beautiful plates containing illustrations of numerous forms of urinary calculi. The description of the latter is by Mr. Jonathan Hutchinson. He remarks that the ease with which stones are now crushed may make it difficult in future years for new museums to obtain specimens of calculi. There is certainly no room for complaint on this score at present.

Bertram C. A. Windle, M.A., M.D.

DIETETIC PREPARATIONS.

SPARKLING WINES.

The Wines of Saumur.

Having completed our remarks on the wines of Epernay and Reims, we now give the result of our experience with those of Saumur. These are to all intents champagnes, and the better class of the Saumur productions will inevitably occupy that place amongst sparkling wines which their merits must undoubtedly secure for them.

Saumur now enters into competition with the champagnes of Reims and Epernay, and is only about half the price of the best brands made in those districts.

Champagne is an expensive stimulant for a doctor to order, but if it can be shown that the wines of Saumur are as good and pure as those of the orthodox champagne districts, it will enable him to prescribe them to many of his patients whose means would scarcely permit them to drink the higher-priced vintages of the Marne.

The new arrangement of the duties upon bottled wines to which we referred in our first article upon sparkling wines tells seriously against the expensive brands of champagne, while those of Saumur only pay a small proportion of it. As we have shown, it has a great advantage over champagne in decreased cost of production, and sparkling Saumur now enters the English market at a further advantage of 3*s*. per dozen. It is not asserted that all Saumurs are equal to the best class of champagnes, but a few of those

we have tested and analysed contain all the essentials of the best champagnes, and those we cannot class in the highest standard are as good, and in some instances better than the lower-priced champagnes.

Until we undertook this investigation we had looked upon sparkling Saumur as a wine of inferior and even doubtful quality, but after carefully comparing the analyses of the champagnes and Saumurs, and being guided also by the experience of well-known wine experts, we strongly recommend as suitable to the purposes of the medical man the wines of Messrs. W. & A. Gilbey and Messrs. Ackerman-Laurance.

Single bottles of these wines can be purchased in nearly every town in the United Kingdom, as Messrs. Gilbey have agents among the leading grocers, and also sell the wines of the latter firm, a facility of purchase which is very convenient in many instances.

The price of W. & A. Gilbey's Castle Brut Saumur, 35*s.* per dozen, and of Messrs. Ackerman-Laurance's Dry-Royal, 38*s.*, and *pro rata* by the single bottle, is sufficiently low to be within the reach of persons of limited means. In justice to Messrs. Gilbey it must also be said that they were the pioneers in introducing a system which was the means of placing pure and reliable wines within the reach of the general public at a much lower price than existed under the old system.

A comparison with the analyses of the champagnes in our previous issues will show how closely the wines of Saumur approach in chemical composition. Our analyst says:—'There is really very little to choose from a chemical point of view between these two wines. They are almost identical in chemical composition with the best champagnes that have been tested; they are sparkling and pleasing to the palate; their alcoholic strength is almost identical, and they are free from excess of sugar and extractives.

W. & A. Gilbey.

Castle Brut—Saumur.

Specific gravity	993·7	
Absolute alcohol, by volume	13·88	per cent.
Equal to proof spirit	24·34	,,
Glucose	1·06	per cent.
Extractives	1·02	,,
Ash	·16	,,
Total solids	2·24	,,
Acidity	·60	,,

Ackerman-Laurance.

Brut Royal—Saumur.

Specific Gravity	996·7	per cent.
Absolute alcohol, by volume	13·9	,,
Equal to proof spirit	24·36	,,
Glucose	1·61	per cent.
Extractives	1·20	,,
Ash	·17	,,
Total solids	2·98	,,
Acidity	·78	,,

V.O.H. SCOTCH WHISKY.

We have received from Mr. C. D. Harrod, of 101 Brompton Road, a sample of V.O.H. special blend Scotch whisky, which has been submitted to a careful analytical examination. Our analyst finds it to be a remarkably clean and fine whisky, free from all impurities, without a trace of fusel oil. It is very soft and mellow, with all the characteristics of old and fully matured whisky. It may be confidently recommended to the medical profession as a pure stimulant. Its exceptionally fine flavour and purity equally fit it for general use where whisky is ordered as a dietetic stimulant, as is now so often the practice.

NEW PREPARATIONS.

MELLIN'S EMULSION OF COD-LIVER OIL WITH HYPOPHOSPHITES.

The Emulsion of Cod-liver Oil with Hypophosphites, manufactured by Mr. Mellin (16 Tichborne Street, Piccadilly Circus), is a good example of what can be done in the way of a stable and palatable emulsion. It is a milky fluid, of decidedly agreeable taste, and devoid of the familiar smell, &c., of the oil. The oil-globules, as seen under the microscope, are small and uniform in size, and they show no tendency to run together after the usual manner of emulsions. The digestibility is notably increased by the fine division, and the preparation, moreover, combines the recognised therapeutical advantages of the hypophosphite treatment with the not less recognised nutrient qualities of the oil.

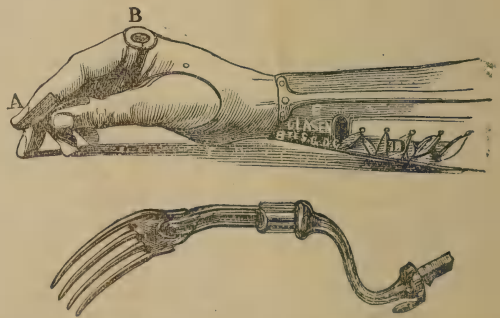
The Vin de Coca (unsweetened), prepared by the same chemist, is manufactured from the fresh leaves of erythroxylon coca, with a basis of red wine. Being unsweetened, it is less apt to disagree with delicate patients than certain other similar wines, although the taste of the coca is very obvious. The valuable tonic and restorative properties of the plant are too well known to need mention.

NEW INVENTIONS.

NEW ARTIFICIAL HAND (CLASEN'S PATTERN).

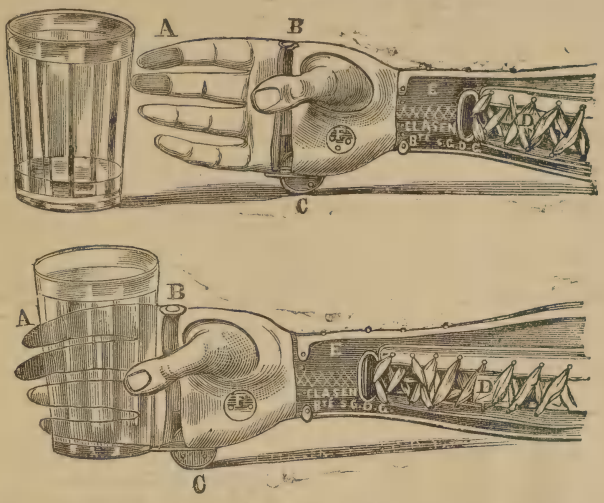
Patent No. 3,260, 1886.

This prothetic apparatus provides the person wearing it with the means of grasping automatically any slightly projecting object on or against any surface whatsoever, without necessitating the assistance of the other hand.



The thumb and the fingers (A B) of this apparatus are articulated, and are so arranged that they may be separated or brought together by means of the roller (C). This roller is inserted into the ulnar border of the hand just below the root of the ring finger. The thumb and fingers are separated in

front of the object to be grasped, by resting the roller on the surface on which the object is placed, and giving the forearm a movement of withdrawal. They close on the object when a movement is made in the opposite direction and remain so.



The internal aspect of the fingers and thumb is covered with small cushions of soft rubber, so as to give a good grasp for smooth polished objects, such as glass.

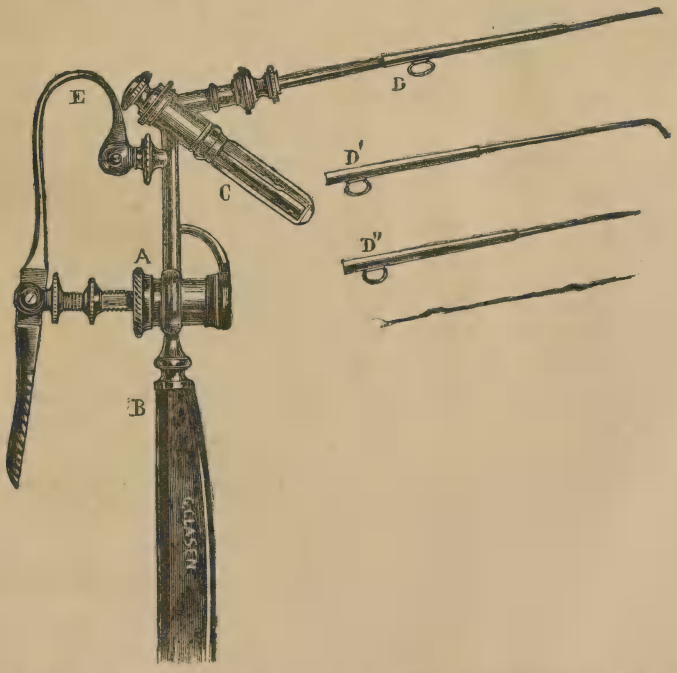
With this hand it is easy to hold a pen or pencil, and the patient is thereby enabled to write. A fork can also be fixed to it, so as to enable him to cut up his food, and feed himself without assistance.

The foregoing brief description renders obvious the advantages which persons who have lost one, or even both hands, can derive from this apparatus.

Manufactured by G. Clasen, 34 Rue de l'Hôpital, Brussels ; 7 Rue Corneille, Paris.

ASPIRATOR-INJECTOR.

THIS instrument, invented by Dr. Ch. Delstanche, of Brussels, was designed with the object of enabling small caustic injections to be made into the substance of morbid tissues, such, for instance, as aural polypi. It is also adapted for exploratory punctures through the tympanic membrane when information is required as to the presence of a liquid of any kind in the middle ear, and to withdraw it. The same apparatus may be employed for the deep injection of medicated liquids through the Eustachian catheter, when it is desired to cause a known quantity of liquid to enter the middle ear through this channel.



The instrument consists of a suction and force pump, A, maintained transversely by a handle, B, and communicating with a tube bent at a right angle and terminating in a screw thread. Various can-

nulæ—blunt, pointed, curved, or straight—each fulfilling special requirements, fit on to the screw thread. A small glass reservoir, C, fixed obliquely to the inner angle of the bent tube, is intended to hold the liquid to be injected, or which has been aspirated. Its capacity corresponds to that of the cylinder A, the object being to preserve the latter from contact with fluids which might damage it. The piston is worked by means of a lever of the second-class, E, spring, tempered so as to simplify the working. A movable nut on the stem of the piston permits the quantity of fluid to be injected or withdrawn, to be fixed beforehand.

These instruments are manufactured by G. Clasen, 34 Rue de l'Hôpital, Brussels, and 7 Rue Corneille, Paris.

MISCELLANY.

The Treatment of Corns.—Dr. C. McDermott, of Ennistimon, writes to the *British Medical Journal* that a saturated solution of salicylic acid in flexible collodion is excellent. The corns should be painted twice a day. It takes about twelve days for their complete removal.

The Rolleston Memorial Prize, of the value of £60, will be awarded at Oxford in the Hilary term, 1890. The prize is open to such members of the Universities of Oxford or Cambridge as will not have exceeded ten years from the date of their matriculation on March 31, 1890, and is to be awarded for original research in any subject comprised under the following heads—animal and vegetable morphology, physiology and pathology, and anthropology—to be selected by the candidates themselves. Candidates wishing to compete are requested to forward their memoirs to the Registrar of the University of Oxford before March 31, 1890. The memoirs should be inscribed 'Rolleston Memorial Essay,' and should each bear the name and address of the author. They may be printed or in manuscript, memoirs already published being admitted to the competition.

Edinburgh Medical Missionary Society.—At the annual meeting of this society, Professor A. R. Simpson presiding, the report showed that there were 23,711 visits paid to the dispensaries by patients and the missionaries to the homes of patients. There were twenty-three students preparing for medical missionary services, and on behalf of these nearly £1,000 had been spent on books and instruments. Mr. Bell read the financial statement, which showed that the income for the past year was £4,701 16*s.* 9*d.*, the leading figures being £3,469 6*s.* 1*d.*, subscriptions and donations; £460 1*s.* 6*d.*, legacies; and £466 14*s.* 6*d.*, interest on investments. The expenditure was £5,127 17*s.* 5½*d.*, including £2,745 17*s.* 6*d.* as expenses of the mission-house, training institution, and dispensary, and £1,941 19*s.* for the support of medical missions at Nazareth, Damascus, Agra, and other places. The society had, during the last three or four years to draw from their capital fund to make up excess of expenditure over income, and it has again been necessary to do so on the present occasion. The report was approved of, and office-bearers elected.

The General Council of Medical Education and Registration for the United Kingdom.—During the forty-fifth session of the General Medical Council just completed, the reports of the inspectors regarding the examinations in medicine and midwifery were in effect that those examinations were on the whole an efficient test of the candidates' qualifications. In the surgery examinations, however, some complaint was made as to the inadequate recognition by many of the licensing bodies in England and Scotland of the importance of operations on the dead body as a test of qualification for the efficient practice of surgery. A motion by Sir John Simon, seconded by Professor Macnamara (Dublin), was proposed in the following terms:—'That the council, being of opinion that the performance of operations on the dead body is a highly important part of a complete test for the efficient practice of surgery, regrets that so many of the licensing bodies in England and Scotland have not hitherto felt themselves able to render their examinations complete in that respect, and the council earnestly recommends to those bodies to consider the means they might use for amending that part of their examinations.' The motion was adopted almost unanimously, an addition, however, being made to it to the effect that the council, while making their recommendation, recognised the difficulty in certain quarters connected with the anatomical supply.

The Increase of Cancer in England.—At the Royal College of Surgeons, Sir Spencer Wells delivered the second 'Morton Lecture on Cancer,' of which series of lectures Sir James Paget delivered the first last year. The Morton Lecture was founded by Mr. John Thomas Morton, of Caterham Valley. On this occasion the presidential chair was occupied by Mr. John Savory, and there were present Sir James Paget, Mr. Willet, Mr. Bryant, Mr. Hulke, Sir James Cormack, Mr. J. Hutchinson, Mr. Sibley, Sir Joseph Fayrer, Mr. Birket, Mr. Jabez Hogg, and Mr. Christopher Heath. Sir Spencer Wells commenced his lecture by remarking that nobody could be more anxious to assist in the attainment of the philanthropic desire of Mr. Morton than the Fellows and members of this college, and no one needed to be reminded of the almost overwhelming importance of the subject, these diseases being, as Sir Spencer said, as heart-breaking to the surgeon as they were mysterious and terrible to the public. Additional reasons for urging the importance of their study now might be found in the fact that, notwithstanding the great advance of sanitary science and the prolongation of the average length of human life, in spite of the shortening of the duration and the lowering of the mortality of some diseases, the prevention—almost the stamping-out—of others, cancerous diseases, so far from being less prevalent or less fatal, were increasing among us. The increase in the number of deaths from cancer was now, and had been for many years past, greater than the proportional increase of population. A doubt, he said, had been expressed as to whether this increase was real or apparent, and due to the more complete and accurate registration of the causes of death. He had investigated the facts, and he showed that the Registrar-General's reports proved that the increase was undoubtedly real, and that the three successive periods of ten years each, from 1851 to 1880, showed a gradual increase of mortality from the affliction, and the increase was continuous in the seven years after the last decennial period, both in males and females, but considerably greater in males than in females. Sir Spencer presented on the walls, in large tables, the figures of the increase in England and Scotland, and the fact was pointed out that the deaths from the disease had increased from 7,245 in 1861 to 17,113 in 1887. It was also shown that the deaths from cancer had gradually, year by year from 1861, increased from 360 per 1,000,000 to 606 in England alone, and in Ireland the increase had been from 350 in 1877 to 430 in 1887. Sir Spencer referred to the services which Dr. Ogle had rendered, in this connection especially, to science, and drew attention to Dr. Ogle's cautious examination of the truth that cancer mortality was lowest on the western side and highest on the eastern side of England, and referred to the high value of the Registrar-General's statistics. It was then, Sir Spencer said, for surgeons to consider their duty as surgeons in relation to these diseases in general, whether they could be checked, and to the surgical treatment when different organs or parts of the body were attacked. Sir Spencer urged the necessity for early operation, and the danger of inadequate, unnecessary, or desperate operations, and compared the results obtained by so-called remedies of a secret character with the work of scientific surgeons.

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